WATER POLLUTION CONTROL PROJECTS

OPERATING SUMMARY

1978

Ontario

Ministry of the Environment

Hon. Harry C. Parrott, D.D.S., Minister

Graham W. S. Scott, Q.C., Deputy Minister

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Pollution Control Branch
Municipal & Private Section
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WATER POLLUTION CONTROL PROJECTS

OPERATED BY:

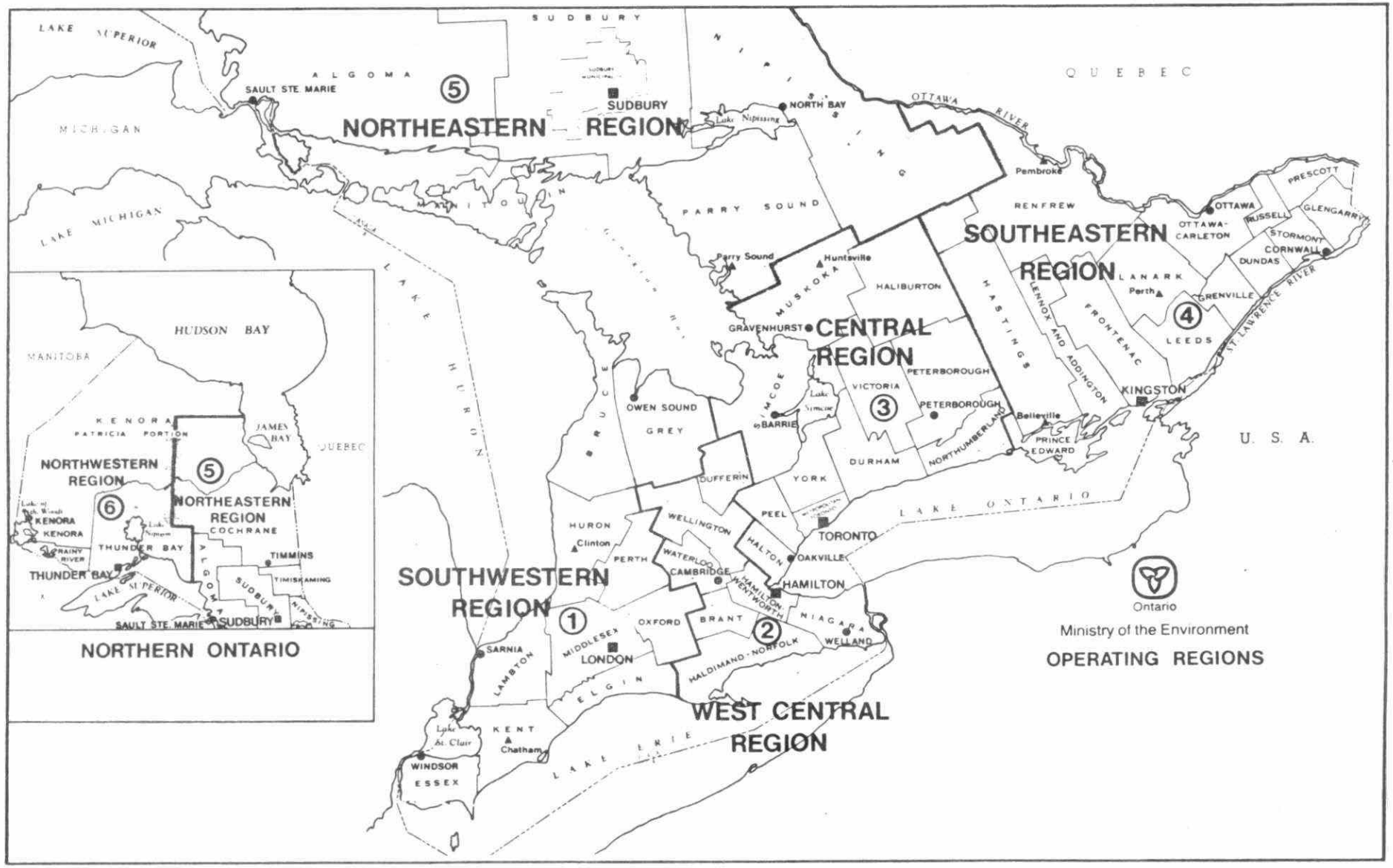
Ontario Ministry of the Environment

PREPARED BY:

THE MUNICIPAL AND PRIVATE SECTION

POLLUTION CONTROL BRANCH

(416) 965-1655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WEST CENTRAL REGION
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NORTHWESTERN REGION
NORTHEASTERN REGION
LAKE SUPERIOR
LAKE MICHIGAN
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Ontario
Ministry of the Environment
OPERATING REGIONS

FOREWORD

The Ministry of the Environment is concerned with the protection and enhancement of the natural environment. And to meet this objective, one of its goals is to ensure the sound management of wastes and water resources across the province. In this regard, the Ministry inspects and regulates all communal water and wastewater facilities, and monitors the performance of the treatment plants and their effluent qualities with routine and special sampling programs. The administration of these services and programs is carried out on a regional basis.

Normally, the responsibility for the provision of communal water and wastewater services lies with the individual municipalities. However, by special arrangement, more than 295 water and wastewater facilities in the Province of Ontario are administered and operated by the six Regional Utility Operations sections of the Ministry of the Environment. In order to maintain operational control and long term evaluation of these provincially-operated facilities, up-to-date statistics are maintained on process parameters and operating costs for each plant, and an annual "Operating Summary" of these statistics is traditionally produced.

In the future, the scope of this statistical data base will be slightly modified and the data collection will be extended to cover the municipally-operated treatment plants. Hence, all water and wastewater treatment facilities in the Province of Ontario will be included in the "Operating Summaries".

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INTRODUCTION

This Operating Summary has been compiled from data collected during 1978 from 101 mechanical treatment plants and 89 waste stabilization ponds.

During the year a total of 78.5 billion gallons of wastewater was treated in these facilities, 72.1 billion gallons in mechanical treatment plants and 6.4 billion gallons in waste stabilization ponds.

The cost of operating 101 mechanical treatment plants was 16.9 million dollars and for 89 waste stabilization ponds, 1.17 million dollars.

PROJECTS INCLUDED IN THIS REPORT

PROJECT	CAPACITY MIGD	WATERCOURSE	PAGE
PRIMARY			41
REGION 1 - Southwest			
1. Owen Sound	3.000	Georgian Bay	44
2. Point Edward	0.570	St. Clair R.	46
REGION 2 - West Central			
3. Nanticoke (Port Dover)	0.900	L. Erie	50
Region 3 - Central			
4. Midland	1.250	Midland Bay	54
Region 4 - Southeast			
5. Cornwall	8.250	St. Lawrence R.	58
6. Petawawa	1.600	Ottawa R.	61
7. Prescott	1.000	St. Lawrence R.	62
Region 5 - Northeast			
8. Espanola	0.660	Spanish R.	66
9. Parry Sound	0.830	McCurry L.	68
10. Sault Ste. Marie	12.000	St. Mary's R.	70
11. Timmins (Mattagami)	7.500	Mattagami R.	72
Region 6 - Northwest			
12. Fort Frances	2.000	Rainy R.	76
CONVENTIONAL ACTIVATED SLUDGE			79
Region 1 - Southwest			
13. Chatham	4.500	Thames R.	82
14. Ingersoll	2.250	Thames R.	84
15. St. Mary's	0.800	Thames R.	86
16. Tillsonburg	1.800	Big Otter Cr.	90
17. Tuckersmith (Van Astra)	0.309	Bayfield R.	92
18. Wallaceburg	1.500	Sydenham R.	94
Region 2 - West Central			
19. Brantford	12.500	Grand R.	98
20. Cambridge (Galt)	8.500	Grand R.	100
21. Cambridge (Preston)	3.710	Grand R.	102
22. Delhi	0.700	Big Cr.	104
23. Dunnville	1.700	Grand R.	106
24. Fergus	1.100	Grand R.	108
25. Haldimand (Caledonia)	0.500	Grand R.	110
26. Haldimand (Hagersville)	0.200	Sandusk Cr.	112
27. Kitchener	27.000	Grand R.	114
28. Waterloo	6.000	Grand R.	116
29. Woolwich (Elmira)	0.680	Canagagigue Cr.	118
Region 3 - Central			
30. Campbellford	1.300	Trent R.	124
31. Mississauga (Lakeview)	50.000	L. Ontario	126
Region 4 - Southeast			
32. Belleville	8.000	Bay of Quinte	130
33. Kingston Twp.	2.450	L. Ontario	132
34. Sidney (Batawa)	0.125	Trent R.	134
35. Trenton	3.500	Bay of Quinte	136
Region 5 - Northeast			
36. North Bay	8.000	L. Nipissing	140
37. Sturgeon Falls	1.000	Sturgeon R.	142
38. Valley East (H., V.C. & V.T.)	2.500	Vermilion R.	144
EXTENDED AERATION			
Region 1 - Southwest			
39. Dresden	1.000	Sydenham R.	151
40. Maidstone (Belle R.)	1.500	Lake St. Clair	152
41. Mildmay	0.213	Otter Cr.	154
42. Moore (Corunna)	0.960	St. Clair R.	156
43. Moore (Courtright)	0.120	St. Clair R.	158
44. Westminster	0.250	Dingman Cr.	160

PROJECTS INCLUDED IN THIS REPORT

PROJECT	CAPACITY	WATERCOURSE	PAGE
EXTENDED AERATION Cont'd			
Region 2 - West Central			
45. Elora	0.083	Grand R.	164
46. Haldimand (Cayuga)	0.200	Grand R.	166
47. Paris	0.500	Grand R.	168
48. Wellesley	0.110	Nith R.	170
49. Wilmot (Baden)	0.203	Baden Cr.	172
Region 3 - Central			
50. Alliston	0.770	Boyne R.	176
51. Coldwater	0.120	Coldwater R.	178
52. Millbrook	0.250	Baxter Cr.	180
53. Mississauga (Clarkson)	12.000	L. Ontario	182
54. Smith (Woodland Acres)	0.07	Otonabee R.	185
Region 4 - Southeast			
55. Bancroft	0.400	York R.	188
56. Barry's Bay	0.273	Kamaniskeg L.	190
57. Chalk River	0.080	Duck L.	192
58. Deseronto	0.300	Bay of Quinte	194
59. Eganville	0.168	Bonnechere R.	196
60. Ernestown (Odessa)	0.200	Millhaven Cr.	198
61. Hawkesbury	2.700	Ottawa R.	200
62. L'Orignal	0.190	Ottawa R.	202
63. Marmora	0.191	Crowe R.	204
64. Merrickville	0.110	Rideau R.	206
65. Pittsburgh (Cana)	0.021	Cataraqui R.	208
Region 5 - Northeast			
66. Black R. - Matheson (M.)	0.150	Black R.	212
67. Latchford	0.075	Montreal R.	214
68. Moosonee (North)	0.055	Butler Cr.	217
69. Rayside-Balfour (Azilda)	0.400	Whitewater L.	218
70. Rayside-Balfour (Chelmsford)	0.675	Whitson Cr.	220
71. Smooth Rock Falls	0.360	Mattagami R.	222
72. Timmins (Whitney & Tisdale)	0.750	Porcupine R.	224
Region 6 - Northwest			
73. Ear Falls	0.400	English R.	230
74. Geraldton	0.400	L. Kenogamisis	232
75. Ignace	0.550	Agimac Cr.	234
76. Pickle Lake	0.200	Kawinogan's R.	239
77. Schreiber	0.250	L. Superior	240
CONTACT STABILIZATION			243
Region 3 - Central			
78. Port McNicoll	0.230	Georgian Bay	246
Region 4 - Southeast			
79. Frankford	0.300	Trent R.	250
Region 5 - Northeast			
80. Haileybury	0.350	L. Timiskaming	254
81. Iroquois Falls	0.900	Abitibi R.	256
82. Kirkland Lake	3.000	Murdock Dr.	258
83. Moosonee (Old Townsite)	0.112	Store Cr.	260
Region 6 - Northwest			
84. Longlac	0.540	Suicide R.	264
85. Red Lake	0.250	Howey Bay	266
HIGH RATE ACTIVATED SLUDGE			269
Region 1 - Southwest			
86. Meaford	0.860	Georgian Bay	273
Region 2 - West Central			
87. Cambridge (Hespeler)	2.050	Speed R.	276
Region 3 - Central			
88. Bradford	0.800	Schomberg R.	280
Region 4 - Southeast			
89. Carleton Place	1.200	Mississippi R.	284
Region 5 - Northeast			
90. Sudbury	11.250	Junction Cr.	288

PROJECTS INCLUDED IN THIS REPORT

PROJECT	CAPACITY MIGD	WATERCOURSE	PAGE
OXIDATION DITCH			
Region 1 - Southwest			
91. Paisley	0.155	Saugeen R.	294
92. Southampton	0.670	Saugeen R.	296
Region 2 - West Central			
93. Grand Valley	0.132	Grand R.	300
94. Woolwich (St. Jacobs)	0.210	Conestoga R.	302
Region 3 - Central			
95. Fenelon Falls	0.220	Fenelon R.	306
96. Hastings	0.233	Trent R.	308
97. Norwood	0.120	Ouse R.	310
Region 5 - Northeast			
98. Nickel Centre (Coniston)	0.350	Coniston Cr.	314
TERTIARY TREATMENT			317
Region 1 - Southwest			
99. Stratford	6.000	Avon R.	320
Region 2 - West Central			
100. Orangeville	1.500	Credit R.	324
101. Simcoe	3.232	Lynn R.	326

PROJECT	ACREAGE	WATERCOURSE	PAGE
WASTE STABILIZATION PONDS			
Region 1 - Southwest			
102. Aylmer	71.9	Catfish Cr.	332
103. Belmont	16.2	Kettle Cr.	333
104. Chesley	17.0	North Saugeen R.	334
105. Dover (Mitchell's Bay)	10.0	L. St. Clair	335
106. Dundalk	16.0	Foley Dr. to Grand R.	336
107. Dutton	10.0	Bennet Cr. to L. Erie	337
108. East Zorra - Tavistock	32.0	Tributary to Thames R.	338
109. Enniskillen (Oil City)	5.4	Black Cr.	339
110. Essex N.E.	24.0	Puce River Dr.	346
111. Essex S.W.	36.0	Canard R.	341
112. Forest	40.0	Hickory Cr.	342
113. Glencoe	28.0	Newbiggen Cr.	343
114. Gosfield N. (Cottam)	20.0	Maddox Dr. to Belle R.	344
115. Harrow	45.0	Cedar Cr.	345
116. Hensall	36.88	Black Cr. to Ausable R.	346
117. Lucan	10.0	Little Ausable R.	347
118. Milverton	15.0	Boyle Dr.	348
119. Mitchell	67.5	Thames R.	349

PROJECTS INCLUDED IN THIS REPORT

PROJECT	ACREAGE	WATERCOURSE	PAGE
WASTE STABILIZATION PONDS			
Region 1 - Southwest (Cont'd)			
120. Moore (Brigden)	20.0	Bear Cr.	350
121. Norwich	30.0	Big Otter Cr.	351
122. Oil Springs	14.0	Black Cr.	352
123. Port Stanley	40.0	Ditch to Kettle Cr.	353
124. Raleigh & Tilbury E. (Merlin)	23.5	Foxton Dr. to Jeannettes Cr.	354
125. Ridgetown	39.5	Gawne Dr. To. McGregor Cr.	355
126. Rodney	16.0	Sixteen Mill Cr.	356
127. Sarnia (Bright's Grove)	30.0	Cr. to Lake Huron	357
128. Seaforth	30.0	Cresswell Cr.	358
129. Sombra (Port Lambton)	24.0	Marshy Cr. to St. Clair R.	359
130. Sombra (Port Sombra)	24.0	St. Clair R.	360
131. Tilbury W. (Comber)	12.0	Gov't Dr. to Big Cr.	361
132. Watford	30.0	Bear Cr.	362
133. West Lorne	20.0	Zoller Dr.	363
134. Wiarton	15.0	Colpoy Bay	364
135. Wingham	30.0	Maitland R.	365
136. Zurich	13.0	Mun. Dr. to L. Huron	366
Region 2 - West Central			
137. Arthur	28.7	Conestoga R.	368
138. Harriston	28.0	Maitland R.	369
139. Nanticoke (Jarvis)	12.0	Sandusk Cr.	370
140. Norfolk (Port Rowan)	20.0	Dedrich Cr.	371
141. Shelburne	13.16	Boyne R.	372
142. Wilmot (New Hamburg)	27.4	Nith R.	373
Region 3 - Central			
143. Beeton	14.8	Beeton Cr.	375
144. Havelock	19.0	Plato Cr.	376
145. Lakefield	38.0	Otonabee R.	377
146. Omemee	18.0	Pigeon R.	378
Region 4 - Southeast			
147. Alfred	44.2	Ruisseau des Azatika Cr.	380
148. Casselman	17.46	S. Nation R.	381
149. Chesterville	14.5	S. Nation R.	382
150. Goulbourn (Richmond)	36.0	Jock R.	383
151. Lancaster	26.0	Finney Cr.	384
152. Leeds & Lansdowne	12.1	Larue Mills Cr.	385
153. Madoc	30.0	Moira R.	386

PROJECTS INCLUDED IN THIS REPORT

PROJECT	ACREAGE	WATERCOURSE	PAGE
WASTE STABILIZATION PONDS Cont'd			
Region 4 - Southeast Cont'd			
154. Plantagenet	17.0	S. Nation R.	387
155. Rockland	19.8	Ottawa R.	388
156. St. Isidore de Prescott	46.8	Scotch R.	389
157. Stirling	12.6	Rawdon Cr.	390
158. Tweed	30.8	Moira R.	391
159. Vankleek Hill	30.0	Little Rideau Cr.	392
160. Westport	7.0	Upper Rideau L.	393
161. Winchester	16.7	Castor R.	394
Region 5 - Northeast			
162. Assiginack (Manitowaning)	7.6	L. Huron	396
163. Black R. - Matheson (Ramore)	3.8	Black R.	397
164. Black R. - Matheson (V.G.)	5.0	Black R.	398
165. Bruce Mines	7.3	L. Huron	399
166. Burk's Falls	19.0	Magnetawan R.	400
167. Caldwell (Verner)	14.0	Veuve R.	401
168. Englehart	20.0	Englehart R.	402
169. Fauquier (Moonbeam)	6.0	Groundhog R.	403
170. Haileybury (Cobalt)	10.0	Farr Cr.	404
171. Hearst	50.0	Mattawishkwia R.	405
172. Little Current	10.0	Georgian Bay	406
173. Mattawa	18.0	Mattawa R.	407
174. Michipicoten (Wawa)	40.0	Magpie R.	408
175. New Liskeard	63.7	Wabi R.	409
176. N. Himsworth (Callander)	14.5	Callander Bay	410
177. Powassan	7.0	Genesee Cr.	411
178. Ratter & Dunnet (Warren)	20.0	Veuve R.	412
179. Shackleton & Machin (Fauquier)	10.0	Groundhog R.	413
180. Sundridge	20.0	Bernard Cr.	414
181. Webbwood	10.0	Gough Cr.	415
Region 6 - Northwest			
182. Emo	10.0	Rainy R.	417
AERATED LAGOONS			418
Region 1 - Southwest			419
183. Durham	0.7	Saugeen R.	420
184. Kincardine	32.0	L. Huron	431
185. Listowel	70.5	Chapman Drain	421
186. Thornbury	24.24	Beaver R.	423
Region 2 - West Central			
187. Nanticoke (Waterford)	18.7	Nanticoke Cr.	425
Region 4 - Southeast			
188. Alexandria	42.4	Delisle R.	427
189. Almonte	45.7	Mississippi R.	428
190. Gananoque	69.4	Gananoque R.	429

PLANT LOADING

Hydraulic and organic loading data are summarized in the following table. For the hydraulic assessment, the average day flow for the year is compared to the design capacity. It should be noted that the number of months in the year during which the average daily flow exceeded the design daily flow is given as a percentage of twelve months (i.e. "% YEAR FLOW GT DESIGN").

For the organic assessment, the design loadings for BOD and S S are compared to the actual loadings.

Fiqures marked with an asterisk (*) are based upon less than twelve months data.

PLANT LOADING

PROJECT	HYDRAULIC LOADING				ORGANIC LOADING					
	DESIGN CAPACITY	AVG. DAILY FLOW	MAX. DAY'S FLOW	AVG. FLOW AS % OF	DESIGN LOADING 1000 LBS / DAY		ACTUAL LOADING 1000 LBS / DAY		% OF DESIGN	
	MGD	MG	MG	DESIGN	BOD	SS	BOD	SS	BOD	SS
PRIMARY TREATMENT										
Region 1 - Southwest										
Owen Sound	3.000	4.634	8.000	153	5.400	6.000	4.426	7.374	82	123
Point Edward	0.570	0.414	0.610	72	0.970	1.140	1.260	2.843	130	249
Region 2 - West Central										
Nanticoke (Port Dover)	0.900	* 1.005	2.033	111	1.900	2.660	2.130	3.259	112	123
Region 3 - Central										
Midland	1.250	1.890	4.210	151	2.810	3.750	1.519	3.431	54	92
Region 4 - Southeast										
Cornwall	8.250	11.187	25.922	134	10.725	13.200	14.654	13.423	137	102
Petawawa	1.600	* 0.775	1.153	48	1.760	1.280	.798	.917	45	72
Prescott	1.000	0.859	3.048	85	0.800	1.600	.501	.944	62	59
Region 5 - Northeast										
Espanola	0.660	0.486	0.757	73	NO DATA AVAILABLE		.595	.668	-	-
Parry Sound	0.830	1.030	2.550	124	2.080	1.660	.844	1.732	41	104
Sault Ste. Marie	12.000	9.807	26.980	81	45.000	36.000	11.694	15.053	26	42
Timmins (Mattagami)	7.500	3.750	7.800	50	13.500	15.000	4.240	6.171	31	41
Region 6 - Northwest										
Fort Frances	2.000	2.395	4.600	119	2.600	3.600	1.190	2.017	46	56
CONVENTIONAL ACTIVATED SLUDGE										
Region 1 - Southwest										
Chatham	4.500	4.972	15.800	110	11.300	11.300	9.997	14.646	89	130
Ingersoll	2.250	1.163	-	51	4.500	4.500	2.036	4.698	45	104
Ingersoll A	0.750	0.324	0.710	43	NO DATA AVAILABLE		0.567	1.308	-	-
Ingersoll B	1.500	0.880	2.570	58	NO DATA AVAILABLE		1.540	3.555	-	-
St. Mary's	0.800	0.568	1.644	71	1.600	1.600	1.661	1.202	104	75
Tillsonburg	1.800	1.005	1.730	55	4.200	4.500	1.025	1.669	24	37
Tuckersmith (Van Astra)	0.309	0.122	0.723	39	-	-	0.052	0.062	-	-
Wallaceburg	1.500	1.024	3.700	68	3.000	3.750	1.384	1.958	46	52
Region 2 - West Central										
Brantford	12.500	9.732	14.800	77	21.250	22.000	15.198	22.975	71	104
Cambridge (Galt)	8.500	5.305	6.898	62	21.250	21.250	7.608	8.947	36	42
Cambridge (Preston)	3.710	1.669	2.569	44	17.500	17.500	10.132	6.605	58	38
Delhi	0.700	0.450	0.712	64	1.200	1.330	0.635	0.841	53	63
Dunnville	1.700	0.917	1.990	53	3.094	-	1.594	1.311	52	-
Fergus	1.100	0.629	1.949	57	2.200	2.200	0.659	1.048	30	48
Haldimand (Caledonia)	0.500	0.396	1.121	79	NO DATA AVAILABLE		0.448	0.713	-	-
Haldimand (Hagersville)	0.200	0.326	0.555	163	NO DATA AVAILABLE		0.153	0.211	-	-
Kitchener	27.000	13.553	20.880	50	74.250	81.000	29.296	32.097	39	40
Waterloo	6.000	6.005	10.994	100	30.000	27.000	12.480	14.747	42	55
Woolwich (Elmira)	0.680	0.578	1.942	85	2.800	2.100	0.954	0.927	34	44
Region 3 - Central										
Campbellford	1.300	1.290	1.960	99	2.600	-	0.861	1.193	33	-
Mississauga (Lakeview)	50.000	36.674	61.020	73	150.000	175.000	109.349	94.496	73	54
Region 4 - Southeast										
Belleville	8.000	7.049	19.930	88	10.400	14.000	13.422	25.846	129	185
Kingston Twp.	2.450	2.161	4.865	88	5.800	-	3.931	3.518	68	-
Sidney (Batawa)	0.125	0.123	1.000	98	0.270	0.308	0.054	0.064	20	21
Trenton	3.500	2.720	7.110	77	8.700	10.500	3.370	4.021	39	38
Region 5 - Northeast										
North Bay	8.000	7.212	15.290	90	12.000	-	10.775	21.010	90	-
Sturgeon Falls	1.000	1.313	3.400	131	1.800	2.000	0.936	1.111	52	56
Valley East (H.,V.C.&V.T.)	2.500	1.018	2.843	40	NO DATA AVAILABLE		1.004	1.833	-	-

PLANT LOADING

PROJECT	HYDRAULIC LOADING				ORGANIC LOADING					
	DESIGN CAPACITY	AVG. DAILY FLOW	MAX. DAY'S FLOW	AVG. FLOW AS % OF	DESIGN LOADING		ACTUAL LOADING			
					1000 LBS / DAY		1000 LBS / DAY		% OF DESIGN	
	MGD	MG	MG	DESIGN	BOD	SS	BOD	SS	BOD	SS
EXTENDED AERATION										
Region 1 - Southwest										
Belle River (Maidstone)	1.500	0.322	1.166	21	4.500	4.500	0.127	0.154	3	3
Dresden	1.000	0.118	0.620	11	2.640	2.200	0.265	0.236	10	11
Mildmay	0.213	0.036	0.070	16	NO DATA AVAILABLE		0.020	0.025	-	-
Moore (Corunna)	0.960	0.298	0.560	31	1.440	1.440	0.350	0.378	24	26
Moore (Courtright)	0.120	0.056	0.151	46	NO DATA AVAILABLE		0.074	0.072	-	-
Westminster	0.250	0.347	0.993	138	0.500	0.500	0.487	0.707	97	141
Region 2 - West Central										
Elora	0.083	* 0.129	0.220	155	0.174	0.208	0.216	0.316	124	152
Haldimand (Cayuga)	0.200	0.139	1.814	69	NO DATA AVAILABLE		0.156	0.172	-	-
Paris	0.500	0.447	0.980	89	1.000	0.850	0.820	0.812	82	95
Wellesley	0.110	0.080	0.448	72	0.220	0.274	0.078	0.082	35	30
Wilmot (Baden)	0.203	0.110	0.306	54	0.490	0.610	0.201	0.259	41	42
Region 3 - Central										
Alliston	0.770	0.606	0.950	78	1.200	1.540	1.133	1.316	94	85
Coldwater	0.120	0.094	0.181	78	NO DATA AVAILABLE		0.057	0.065	-	-
Millbrook	0.250	* 0.108	0.342	43	NO DATA AVAILABLE		0.115	0.146	-	-
Mississauga (Clarkson)	12.000	10.302	16.500	85	22.200	24.000	19.144	25.128	86	105
Smith (Woodland Acres)	0.070	* 0.046	0.080	16	NO DATA AVAILABLE		0.029	0.043	-	-
Region 4 - Southeast										
Bancroft	0.400	0.156	0.358	39	0.800	-	0.078	0.104	10	-
Barry's Bay	0.273	0.078	0.112	28	0.600	-	0.135	0.129	22	-
Chalk River	0.080	0.080	0.135	100	NO DATA AVAILABLE		0.126	0.193	-	-
Deseronto	0.300	0.191	0.356	63	0.590	0.670	0.227	0.240	38	36
Eganville	0.168	0.94	0.456	55	0.309	-	0.119	0.146	38	-
Ernestown (Odessa)	0.200	* 0.157	0.404	78	NO DATA AVAILABLE		0.084	0.100	-	-
Hawkesbury	2.700	* 1.187	2.703	79	NO DATA AVAILABLE		0.890	3.323	-	-
L'Orignal	0.190	* 0.125	0.574	65	0.380	0.475	0.082	0.108	22	23
Marmora	0.191	0.095	0.402	49	0.382	0.382	0.070	0.132	18	35
Merrickville	0.110	0.065	0.196	59	0.275	0.275	0.074	0.113	27	41
Pittsburgh (Cana)	0.021	0.021	0.169	100	0.040	0.046	0.019	0.024	47	52
Region 5 - Northeast										
Black R. - Matheson (M.)	0.150	0.244	0.670	162	NO DATA AVAILABLE		0.090	0.138	-	-
Latchford	0.075	0.065	0.126	86	0.152	0.175	0.053	0.076	35	43
Moosonee (North)	0.055	0.026	0.070	47	NO DATA AVAILABLE		0.019	0.039	-	-
Rayside-Balfour (Azilda)	0.400	0.388	1.030	97	NO DATA AVAILABLE		0.349	0.464	-	-
Rayside-Balfour (Chelmsford)	0.675	0.689	1.550	110	NO DATA AVAILABLE		0.721	1.502	-	-
Smooth Rock Falls	0.360	0.322	0.817	89	0.540	0.540	0.270	0.220	50	41
Timmins (Whitney & Tisdale)	0.750	0.890	2.707	118	1.300	1.500	0.645	1.152	50	77
Region 6 - Northwest										
Ear Falls	0.400	0.127	0.252	31	1.120	1.240	0.100	0.164	9	13
Geraldton	0.400	0.366	1.410	91	0.918	-	0.171	0.301	19	-
Ignace	0.550	0.143	0.758	26	1.600	1.100	0.131	0.159	8	14
Pickle Lake	0.200	-	-	-	NO DATA AVAILABLE		-	-	-	-
Schreiber	0.250	* 0.130	0.305	52	1.125	0.60	0.124	0.149	11	25
CONTACT STABILIZATION										
Region 3 - Central										
Port McNicoll	0.230	0.202	0.460	87	0.391	0.460	0.174	0.304	44	66
Region 4 - Southeast										
Frankford	0.300	0.306	1.200	102	0.510	0.600	0.163	0.255	32	42
Region 5 - Northeast										
Haileybury	0.350	* 0.619	1.456	176	0.600	0.700	0.811	1.223	135	175
Iroquois Falls	0.900	0.676	2.312	75	NO DATA AVAILABLE		0.640	0.913	-	-
Kirkland Lake	3.000	2.720	12.000	90	NO DATA AVAILABLE		1.110	2.200	-	-
Moosonee (Old Townsite)	0.112	0.091	0.179	81	0.284	0.320	0.066	0.101	23	32
Region 6 - Northwest										
Longlac	0.540	0.120	1.000	22	1.100	-	0.096	0.150	9	-
Red Lake	0.250	0.312	0.467	124	.51	.60	0.170	0.881	33	147

PLANT LOADING

PROJECT	HYDRAULIC LOADING				ORGANIC LOADING					
	DESIGN CAPACITY	AVG. DAILY FLOW	MAX. DAY'S FLOW	AVG. FLOW AS % OF	DESIGN LOADING 1000 LBS / DAY		ACTUAL LOADING 1000 LBS / DAY		% OF DESIGN	
	MGD	MG	MG	DESIGN	BOD	SS	BOD	SS	BOD	SS
HIGH RATE ACTIVATED SLUDGE										
Region 1 - Southwest										
Meaford	0.860	0.529	1.418	61	3.440	1.700	0.403	0.607	12	36
Region 2 - West Central										
Cambridge (Hespeler)	2.050	0.956	1.587	46	5.300	4.400	2.053	1.729	39	39
Region 3 - Central										
Bradford	0.800	0.583	1.222	72	3.450	4.125	1.158	2.263	34	55
Region 4 - Southeast										
Carleton Place	1.200	1.354	2.200	112	1.300	1.500	0.535	0.911	41	61
Region 5 - Northeast										
Sudbury	11.250	10.438	22.112	92	11.000	15.600	12.786	13.012	116	83
OXIDATION DITCH										
Region 1 - Southwestern										
Paisley	0.155	0.062	0.131	40	0.264	-	0.075	0.091	28	-
Southampton	0.670	0.211	0.740	31	WINTER .493 SUMMER .950	-	0.167	0.113	34 18	-
Region 2 - West Central										
Grand Valley	0.132	0.062	0.399	46	NO DATA AVAILABLE		0.098	0.125	-	-
Woolwich (St. Jacobs)	0.210	0.156	0.605	74	NO DATA AVAILABLE		0.314	0.258	-	-
Region 3 - Central										
Fenelon Falls	0.220	0.188	0.515	85	0.374	0.440	0.160	0.207	43	47
Hastings	0.233	* 0.052	0.254	22	NO DATA AVAILABLE		0.287	0.367	-	-
Norwood	0.120	0.112	0.139	69	0.320	0.400	0.129	0.181	40	45
Region 5 - Northeastern										
Nickel Centre (Coniston)	0.350	0.333	0.959	95	0.700	0.875	0.364	0.318	52	36
TERTIARY TREATMENT										
Region 1 - Southwest										
Stratford	6.000	4.326	14.000	72	8.400	15.000	4.091	6.730	48	45
Region 2 - West Central										
Orangeville	1.500	1.619	4.520	107	3.000	3.750	1.524	2.292	51	61
Simcoe	3.232	2.413	4.320	74	7.100	7.400	5.348	4.281	75	72
Simcoe (Plant A)	0.600	0.556	1.140	92	NO DATA AVAILABLE		1.510	0.982	-	-
Simcoe (Plant B)	1.400	1.600	2.960	114	NO DATA AVAILABLE		4.277	3.104	-	-

PLANT PERFORMANCE

The arithmetic mean of the monthly values for biochemical oxygen demand and suspended solids concentrations for plant influent and effluent are shown together with the number of samples taken. These results include both samples sent to the Ministry of the Environment laboratories as well as those analyzed at the plants. The number of months in the year during which the average monthly effluent concentrations exceeded 15 mg/l is expressed as a percentage of twelve months (i.e."% YEAR SAMPLES GT 15 mg/l"). Figures marked with an asterisk (*) are based upon less than twelve months of data.

PLANT PERFORMANCE

PROJECT	BIOCHEMICAL OXYGEN DEMAND						SUSPENDED SOLIDS					
	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION
	NUMBER of SAMPLES	AVERAGE BOD mg/l	NUMBER of SAMPLES	AVERAGE BOD mg/l	% of samples greater than 15 mg/l	percent	NUMBER of SAMPLES	AVERAGE S.S. CONCN mg/l	NUMBER of SAMPLES	AVERAGE S.S. CONCN mg/l	% of samples greater than 15 mg/l	percent
PRIMARY TREATMENT												
Region 1 - Southwest												
Owen Sound	22	95	44	43	100	55	211	159	168	26	91	83
Point Edward	10	* 304	9	* 82	100	75	10	* 686	9	* 53	100	92
Region 2 - West Central												
Nanticoke (Port Dover)	23	212	23	52	91	75	23	324	23	29	75	91
Region 3 - Central												
Midland	12	80	12	35	100	56	12	181	12	25	66	86
Region 4 - Southeast												
Cornwall	18	131	19	168	100	27	22	120	22	79	100	34
Petawawa	11	* 103	11	* 54	100	47	24	* 118	24	* 70	100	40
Prescott	26	58	26	36	100	38	26	109	26	39	100	64
Region 5 - Northeast												
Espanola	33	122	30	53	100	56	33	137	30	49	100	64
Parry Sound	24	82	24	30	100	63	64	168	65	55	100	67
Sault Ste. Marie	71	119	68	64	100	46	125	153	102	58	100	62
Timmins (Mattagami)	19	113	19	48	100	57	37	164	35	43	100	73
Region 6 - Northwest												
Fort Frances	28	* 49	30	* 41	100	17	54	84	54	50	100	40
CONVENTIONAL ACTIVATED SLUDGE												
Region 1 - Southwest												
Chatham	59	201	57	10	16	94	252	294	249	9	8	96
Ingersoll	23	* 175	-	-	-	-	24	* 404	-	-	-	-
Ingersoll (Plant A)	21	* 175	14	* 8	8	95	22	* 404	16	* 9	16	97
Ingersoll (Plant B)	21	* 175	15	* 9	16	94	22	* 404	16	* 8	16	98
St. Mary's	31	292	31	6	0	97	31	211	31	7	0	96
Tillsonburg	12	102	12	3	0	97	48	166	42	7	8	95
Tuckersmith (Van Astra)	19	43	19	3	0	92	19	51	19	6	0	87
Wallaceburg	55	135	54	5	0	95	258	* 191	239	* 9	9	95
Region 2 - West Central												
Brantford	88	156	92	10	16	93	226	236	240	14	41	94
Cambridge (Galt)	79	143	79	9	0	93	161	168	321	13	16	92
Cambridge (Preston)	62	607	153	11	16	98	327	395	244	24	91	93
Delhi	24	141	23	8	9	94	112	187	113	9	0	95
Dunnville	21	173	19	5	0	97	40	143	56	13	8	91
Fergus	18	* 104	15	* 13	20	87	21	* 166	222	* 14	9	91
Haldimand (Caledonia)	17	* 113	14	* 30	72	73	27	* 180	37	* 26	81	85
Haldimand (Hagersville)	20	47	20	3	0	95	20	64	20	11	16	83
Kitchener	96	216	82	10	0	95	226	236	205	11	8	95
Waterloo	93	207	92	19	83	90	233	245	232	21	83	91
Woolwich (Elmira)	39	* 165	33	* 12	16	92	101	* 160	100	* 43	100	73
Woolwich (Elmira) UNTROYAL	42	425	-	-	-	-	102	146	-	-	-	-
Woolwich (Elmira) Town	46	160	-	-	-	-	98	168	-	-	-	-
Region 3 - Central												
Campbellford	13	* 66	12	* 6	0	90	56	92	51	7	0	92
Mississauga (Lakeview)	134	298	92	13	33	95	135	257	91	17	41	93
Region 4 - Southeast												
Belleville	145	190	143	16	58	91	133	366	131	17	50	95
Kingston Twp.	69	181	126	21	58	88	70	162	130	13	33	91
Sidney (Batawa)	21	44	28	14	41	68	63	52	62	12	25	77
Trenton	33	123	32	17	41	86	244	* 147	219	* 16	45	89
Region 5 - Northeast												
North Bay	47	149	47	13	25	91	236	291	234	17	50	94
Sturgeon Falls	22	71	23	4	0	94	64	84	60	8	0	91
Valley East (H.,V.C.&V.T.)	21	98	19	10	8	90	61	180	114	6	8	96

PLANT PERFORMANCE

PROJECT	BIOCHEMICAL OXYGEN DEMAND						SUSPENDED SOLIDS					
	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION
	NUMBER of SAMPLES	AVERAGE BOD mg/l	NUMBER of SAMPLES	AVERAGE BOD mg/l	% of samples greater than 15 mg/l	percent	NUMBER of SAMPLES	AVERAGE S.S. CONC mg/l	NUMBER of SAMPLES	AVERAGE S.S. CONC mg/l	% of samples greater than 15 mg/l	percent
EXTENDED AERATION												
Region 1 - Southwest												
Belle River (Maidstone)	61	39	36	3	0	93	62	47	62	10	8	79
Dresden	25	* 225	25	* 9	12	95	25	* 200	25	* 14	37	92
Mildmay	17	* 58	17	* 4	0	93	17	* 71	17	* 9	12	86
Moore (Corunna)	31	117	31	8	8	93	31	127	61	8	0	93
Moore (Courtright)	12	* 133	11	* 7	0	94	12	130	12	22	83	83
Westminster	22	140	13	8	8	94	22	204	13	10	8	95
Region 2 - West Central												
Elora	13	* 167	17	* 20	58	88	13	* 245	183	* 59	100	75
Haldimand (Cayuga)	17	112	18	2	0	98	17	123	17	9	0	92
Paris	43	* 183	33	* 32	90	82	45	* 181	33	* 51	100	71
Wellesley	19	* 98	21	* 5	0	94	49	102	42	20	50	80
Wilmot (Baden)	21	* 183	20	* 2	0	98	21	* 236	19	* 10	0	95
Region 3 - Central												
Alliston	12	187	12	7	8	96	66	217	66	19	41	91
Coldwater	12	61	12	6	8	90	12	69	12	12	16	82
Millbrook	15	* 105	15	* 8	18	92	15	* 125	14	* 33	70	73
Mississauga (Clarkson)	118	185	129	5	0	97	122	243	129	9	0	96
Smith (Woodland Acres)	2	* 65	1	* 1	0	98	2	* 95	2	* 6	0	93
Region 4 - Southeast												
Bancroft	28	50	24	7	0	86	54	67	58	13	33	80
Barry's Bay	25	173	25	19	50	89	87	166	87	29	33	82
Chalk River	20	158	19	33	75	79	39	242	26	35	83	85
Deseronto	21	* 119	20	* 9	10	92	22	* 125	21	* 8	30	93
Eganville	24	127	24	6	0	95	24	156	23	8	0	95
Ernestown (Odessa)	40	* 53	45	* 6	0	88	40	* 63	45	* 21	63	66
Hawkesbury	1	* 75	1	* 20	100	73	1	* 280	1	* 14	0	95
L'Orignal	16	* 66	10	* 5	0	92	16	* 87	10	* 13	30	85
Marmora	23	74	23	10	8	86	51	139	63	19	50	86
Merrickville	44	114	44	7	0	94	40	175	44	12	25	92
Pittsburgh (Cana)	39	91	37	22	58	75	56	114	56	21	66	81
Region 5 - Northeast												
Black R. - Matheson (M.)	25	37	23	5	0	87	24	* 56	17	* 14	27	74
Latchford	19	82	19	4	0	95	23	118	23	20	83	83
Moosonee (North)	4	* 76	3	* 23	33	69	4	* 150	3	* 17	66	88
Rayside-Balfour (Azilda)	21	90	20	3	0	96	60	119	62	8	0	93
Rayside-Balfour (Chelmsford)	22	104	22	9	16	91	104	218	156	9	16	95
Smooth Rock Falls	17	* 84	19	* 2	0	97	34	68	48	5	0	93
Timmins (Whitney & Tisdale)	14	* 72	20	* 8	10	89	50	129	47	17	33	87
Timmins (W.T.) Plant A	-	-	13	5	-	-	-	-	33	18	44	-
Timmins (W.T.) Plant B	-	-	13	6	-	-	-	-	29	17	66	-
Region 6 - Northwest												
Ear Falls	12	79	12	21	33	73	12	129	12	57	41	56
Geraldton	16	* 46	17	* 2	0	95	16	* 82	17	* 27	54	67
Ignace	28	* 91	52	* 6	0	93	30	* 111	56	* 14	30	87
Ignace (Plant A)	-	-	4	4	-	-	-	-	4	9	-	-
Ignace (Plant B)	-	-	2	4	-	-	-	-	2	11	-	-
Pickle Lake	24	57	25	6	0	89	24	86	25	12	33	85
Schreiber	10	* 95	9	* 14	33	85	9	* 114	9	* 57	100	50
CONTACT STABILIZATION												
Region 3 - Central												
Port McNicoll	12	86	12	4	0	95	12	150	12	10	0	93
Region 4 - Southeast												
Frankford	19	* 53	18	* 15	36	72	61	* 83	55	* 18	50	77
Region 5 - Northeast												
Haileybury	17	* 131	17	* 17	40	87	17	* 197	17	* 19	30	90
Iroquois Falls	22	94	22	8	8	91	70	135	69	10	0	92
Kirkland Lake	23	40	23	11	16	73	67	80	74	14	16	82
Moosonee (Old Townsite)	5	* 73	5	* 22	75	69	5	* 111	5	* 30	100	72
Region 6 - Northwest												
Longlac	17	* 80	17	* 12	22	84	17	* 125	17	* 13	11	89
Red Lake	15	54	15	23	58	58	15	282	15	49	83	82

PLANT PERFORMANCE

PROJECT	BIOCHEMICAL OXYGEN DEMAND						SUSPENDED SOLIDS					
	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION	PLANT INFLUENT		PLANT EFFLUENT			REDUCTION
	NUMBER of SAMPLES	AVERAGE BOD mg/l	NUMBER of SAMPLES	AVERAGE BOD mg/l	% of samples greater than 15 mg/l	percent	NUMBER of SAMPLES	AVERAGE S S CONC^n mg/l	NUMBER of SAMPLES	AVERAGE S S CONC^n mg/l	% of samples greater than 15 mg/l	percent
HIGH RATE ACTIVATED SLUDGE												
Region 1 - Southwest												
Meaford	29	76	30	6	0	92	42	114	40	6	0	95
Region 2 - West Central												
Cambridge (Hespeler)	58	214	99	21	83	90	57	180	104	31	100	82
Region 3 - Central												
Bradford	14	198	12	18	58	90	222	388	67	23	41	94
Region 4 - Southeast												
Carleton Place	23	39	23	24	75	39	23	67	23	26	75	61
Region 5 - Northeast												
Sudbury	30	122	30	14	33	88	85	124	190	13	25	89
OXIDATION DITCH												
Region 1 - Southwestern												
Paisley	22	122	22	6	8	95	22	147	22	7	8	95
Southampton	58	79	27	2	0	97	64	53	60	9	0	83
Region 2 - West Central												
Grand Valley	25	159	25	6	8	96	48	201	52	7	0	96
Woolwich (St. Jacobs)	23	201	22	5	0	97	48	165	49	20	50	87
Region 3 - Central												
Fenelon Falls	34	85	34	4	0	95	34	110	34	13	25	88
Hastings	10	* 552	10	* 7	11	98	10	* 706	9	* 16	50	97
Norwood	17	117	17	7	8	94	16	163	18	11	16	93
Region 5 - Northeastern												
Nickel Centre (Coniston)	16	109	16	13	16	87	159	95	147	13	0	86
TERTIARY TREATMENT												
Region 1 - Southwest												
Stratford	62	94	58	5	0	94	62	155	59	6	0	96
Region 2 - West Central												
Orangeville	24	94	24	5	0	94	57	141	56	6	0	95
Simcoe	20	221	19	7	0	96	78	177	88	9	8	94
Simcoe A	3	271	2	8	0	97	3	176	3	11	33	93
Simcoe B	4	267	4	9	0	96	4	194	4	14	33	92

OPERATION - DATA LAGOONS

The annual flow and average daily influent flow are shown on the following table.

The BOD, suspended solids, total phosphorus and total kjeldahl nitrogen concentrations are for the lagoon influent and effluent.

The value shown in the "Number of Samples" column represents the number of BOD samples. The number of samples for the other parameters may vary from this number.

OPERATING DATA-LAGOONS

PROJECT	FLOW		INFLUENT					EFFLUENT				
	TOTAL million gallons	AVERAGE DAY mil. gallons	NUMBER of SAMPLES	BOD mg/l	SUSP SOLIDS mg/l	TOTAL P mg/l P	KJELDAHL NITROGEN mg/l N	NUMBER of SAMPLES	BOD mg/l	SUSP SOLIDS mg/l	TOTAL P mg/l P	KJELDAHL NITROGEN mg/l N
WASTE STABILIZATION PONDS												
Region 1-Southwest												
Aylmer	261.2	.717	28	145.2	159.5	12.5	29.2	26	18.2	15.1	3.6	15.2
Belmont	18.3	.050	26	127.4	126.4	7.6	39.1	11	5.4	8.1	.7	3.4
Chesley	73.0	.192	19	81.7	83.0	4.9	18.4	19	12.9	12.0	2.6	7.1
Dover (Mitchell's Bay)	4.9	.014	NO DATA AVAILABLE					(NO DISCHARGE)				
Dundalk	43.0	.114	9	82.1	87.9	5.8	36.6	17	14.7	34.3	.6	8.7
Dutton	30.5	.083	12	228.9	153.4	9.3	56.4	2	16.6	58.0	.6	-
East Zorra (Tavistock)	73.9	.203	30	311.7	189.0	13.3	78.7	47	52.2	29.4	3.3	19.4
Enniskillen (Oil City)	4.2	.012	8	181.1	126.0	13.9	43.8	8	(NO DISCHARGE)		-	20.1
Essex (N.E.)	43.5	.119	9	79.4	190.2	5.5	84.6	6	19.9	207.6	1.1	280.7
Essex (S.W.)	107.4	.291	13	108.6	275.1	6.2	33.3	25	7.1	19.9	.7	3.2
Forest	55.7	.153	2	185.0	148.5	13.2	77.5	(NO DISCHARGE)				
Glencoe	25.9	.071	6	182.7	147.7	11.7	43.3	(NO DISCHARGE)				
Gosfield N. (Cottam)	16.7	.046	1	-	42.0	4.8	17.4	1	(NO DISCHARGE)			83.0
Harrow	67.2	.184	12	360.3	1030.8	10.8	50.8	22	7.0	12.4	.6	3.4
Hensall	26.0	.071	NO DATA AVAILABLE					(NO DISCHARGE)				
Lucan	55.9	.145	8	157.7	133.7	6.6	47.1	10	24.0	7.0	3.6	17.3
Milverton	44.9	.123	21	600.0	305.9	17.2	86.2	1	118.0	35.0	2.2	-
Mitchell	191.1	.544	12	194.6	71.2	8.5	25.3	17	34.5	29.3	3.3	8.7
Moore (Brigden)	9.7	.027	9	120.6	95.9	11.4	51.5	3	12.1	27.3	1.4	1.4
Norwich	49.8	.137	10	174.0	334.2	6.9	50.6	4	12.5	16.4	1.2	6.2
Oil Springs	13.2	.036	7	99.6	110.7	8.2	41.8	1	35.0	239.5	2.1	20.3
Port Stanley	59.9	.164	25	162.4	238.3	6.5	31.8	14	8.4	17.8	1.1	7.0
Raleigh & Tilbury E (Merlin)	12.2	.033	8	231.1	248.1	9.6	61.4	(NO DISCHARGE)				
Ridgetown	67.2	.184	3	151.3	120.3	9.3	38.0	1	32.0	44.0	.5	-
Rodney	22.3	.061	15	356.2	603.5	9.2	65.4	2	35.6	103.0	1.4	11.1
Sarnia (Bright's Grove)	36.0	.099	NO DATA AVAILABLE					(NO DISCHARGE)				
Seaforth	128.1	.359	5	48.0	63.0	4.1	25.0	9	14.5	24.5	1.9	11.0
Sombra (Port Lambton)	28.7	.078	8	106.0	91.3	7.2	34.1	9	4.7	21.9	.7	1.7
Sombra (Port Sombra)	12.6	.034	9	108.6	84.1	8.3	52.6	5	4.5	21.0	.7	1.6
Tilbury West (Comber)	17.0	.047	4	111.0	96.8	7.0	30.6	2	5.8	27.3	.2	2.5
Watford	36.6	.100	1	285.0	1000.0	-	-	2	6.8	10.5	2.0	-
West Lorne	40.2	.110	14	91.2	49.8	4.5	29.8	4	6.2	15.9	.3	-
Wiarton	188.4	.516	11	194.4	479.7	7.5	30.9	11	16.8	46.3	1.9	7.9
Wingham	195.0	.534	12	107.7	134.2	5.8	34.3	12	11.9	10.3	2.5	8.2
Zurich	27.5	.075	1	80.0	352.0	3.5	-	1	18.0	-	3.6	-
Region 2-West Central												
Arthur	67.2	.184	12	125.8	148.6	4.8	31.0	17	29.0	61.0	1.8	6.3
Harriston	106.9	.293	16	166.4	300.1	14.6	41.5	12	15.2	27.8	3.3	-
Nanticoke (Jarvis)	51.0	.154	11	130.1	191.4	8.1	35.2	24	21.7	17.6	1.9	13.8
Norfolk (Port Rowan)	18.8	.093	2	132.5	149.0	9.2	56.0	6	11.0	31.0	.9	7.8
Shelburne	125.6	.344	17	101.4	114.9	6.2	35.7	18	33.4	41.5	3.8	17.3
Wilmot (New Hamburg)	102.0	.280	53	210.1	302.2	10.1	57.3	17	19.4	22.9	2.2	15.8
Region 3-Central												
Beeton	52.5	.144	9	98.9	174.0	5.7	33.6	NO DATA AVAILABLE				
Havelock	48.6	.133	4	101.5	181.0	5.3	32.0	6	7.0	8.8	1.6	7.1
Lakefield	100.1	.275	8	92.0	96.5	6.3	40.0	11	18.5	20.5	2.9	16.0
Omemee	14.7	.040	7	167.7	337.9	9.2	53.3	5	3.1	6.7	1.3	3.7

OPERATING DATA-LAGOONS

PROJECT	FLOW		INFLUENT					EFFLUENT				
	TOTAL million gallons	AVERAGE DAY mil gallons	NUMBER of SAMPLES	BOD mg/l	SUSP SOLIDS mg/l	TOTAL P mg/l P	KJELDAHL NITROGEN mg/l N	NUMBER of SAMPLES	BOD mg/l	SUSP SOLIDS mg/l	TOTAL P mg/l P	KJELDAHL NITROGEN mg/l N
Region 4 - Southeast												
Alfred	38.5	.106	22	146.8	191.5	7.8	31.6	15	9.5	24.9	1.4	4.5
Casselman	22.6	.093	16	181.9	302.7	10.3	49.6	9	8.7	48.1	.5	2.5
Chesterville	44.5	.133	15	78.3	82.4	8.2	25.8	NO DATA AVAILABLE				
Goulbourn (Richmond)	108.9	.299	22	60.4	61.9	4.3	20.8	20	6.4	16.2	2.9	2.9
Lancaster	32.2	.088	5	142.8	300.8	5.3	35.0	2	10.9	51.5	.4	2.0
Leeds & Lansdowne	7.7	.021	10	97.2	92.6	7.9	41.5	21	2.7	5.7	.2	1.3
Madoc	59.4	.163	19	81.3	96.2	5.4	29.5	17	5.3	15.0	.8	3.3
Plantagenet	38.0	.106	23	178.7	291.7	8.9	33.6	8	11.8	21.8	2.1	8.5
Rockland	87.9	.243	44	61.3	55.5	8.3	24.2	11	14.9	34.6	2.8	9.3
St. Isidore De Prescott	8.0	.033	16	390.0	674.8	16.9	63.6	(NO DISCHARGE)				
Stirling	14.2	.116	NO DATA AVAILABLE					NO DATA AVAILABLE				
Tweed	21.4	.233	NO DATA AVAILABLE					9	4.9	6.7	.6	2.0
Vankleek Hill	40.3	.123	12	210.3	189.3	10.1	50.7	(NO DISCHARGE)				
Westport	16.6	.046	11	67.5	62.8	5.9	34.3	15	12.7	16.6	.7	9.2
Winchester	56.5	.155	17	106.1	156.0	7.5	29.8	NO DATA AVAILABLE				
Region 5 - Northeast												
Assiginack (Manitowaning)	17.7	.048	25	153.2	257.0	6.9	39.5	6	3.6	8.2	.7	2.2
Black R. Matheson (V.G.)	-	-	18	112.9	259.8	6.7	34.4	18	11.9	23.5	4.3	6.6
Black R. Matheson (R.)	7.1	.033	23	126.6	169.3	8.1	50.8	16	25.1	50.9	5.5	12.0
Bruce Mines	22.4	.061	31	116.1	115.7	6.7	28.3	9	11.3	30.0	1.8	9.0
Burks Falls	17.8	.049	7	82.3	91.7	6.6	43.3	3	10.0	20.0	1.0	-
Caldwell (Verner)	41.8	.137	11	100.6	135.7	6.1	30.1	5	26.0	53.4	2.6	-
Englehart	108.1	.296	22	67.1	82.1	4.5	25.4	22	20.6	18.8	3.2	11.4
Fauquier (Moonbeam)	37.5	.103	19	140.1	154.4	7.8	46.6	12	38.7	28.2	5.7	20.5
Haileybury (N. Cobalt)	24.2	.066	15	93.6	109.8	7.5	54.2	3	11.8	19.5	2.1	9.0
Hearst	273.5	.748	17	112.7	87.1	5.4	27.3	38	28.4	46.2	4.0	28.6
Little Current	51.1	.140	7	64.6	84.3	4.6	4.4	5	11.7	15.7	1.9	7.8
Mattawa	47.5	.130	17	32.3	35.0	2.0	12.8	17	21.7	31.8	3.3	16.8
Michipicoten (Wawa)	226.0	.614	7	48.6	62.1	3.4	20.9	7	6.6	12.9	-	-
New Liskeard	335.5	.931	14	145.6	179.1	6.8	24.9	15	22.2	23.0	4.5	12.0
North Himsworth (Callander)	31.9	.087	22	118.2	117.5	6.1	39.4	16	9.3	22.2	1.2	12.3
Powassan	49.6	.136	7	106.3	164.8	6.8	45.2	4	25.8	32.3	2.9	16.5
Ratter & Dunnett (Warren)	19.0	.052	13	149.0	177.2	5.9	28.3	2	4.0	21.0	.5	13.6
Shackleton & Machin (Fauquier)	19.2	.052	15	107.5	151.7	5.9	32.6	16	23.2	18.8	2.3	14.7
Sundridge	20.7	.057	4	49.7	54.3	2.9	22.0	5	4.0	33.0	.9	2.3
Webbwood	5.8	.016	14	184.2	170.9	11.3	76.5	(NO DISCHARGE)				
Region 6 - Northwest												
Emo	20.6	.056	9	137.2	151.1	9.1	35.8	12	8.2	51.0	1.0	4.1
AERATED LAGOONS												
Region 1 - Southwest												
Durham	72.6	.199	23	106.2	122.1	7.0	44.1	25	47.4	93.3	6.0	22.3
Kincardine	146.2	.392	22	95.6	94.6	6.0	38.1	23	10.1	9.2	4.0	12.5
Listowel	382.0	1.047	31	23.8	169.5	5.6	24.2	15	23.8	15.2	1.1	13.7
Thornbury	71.0	.194	38	44.6	60.2	1.4	7.7	28	23.9	19.2	2.2	4.2
Region 2 - West Central												
Nanticoke (Waterford)	108.8	.294	12	96.1	62.0	4.5	23.4	16	20.3	22.1	3.8	15.4
Region 4 - Southeast												
Alexandria	294.9	1.075	11	157.7	98.1	25.0	26.2	9	21.5	22.3	10.2	8.2
Almonte	175.6	.526	23	85.9	106.7	5.4	29.9	20	9.0	19.4	2.5	3.2
Gananoque	401.0	1.101	4	47.0	73.5	2.7	17.0	5	13.3	33.7	2.8	4.4

PROJECT STAFF

During 1978 the 190 water pollution control plants employed a total of 404.4 staff. The fractional figures shown, arise from joint operation of water projects in the same municipality (see Water Supply 1978 Operating Summary) or employment of part-time staff.

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASS'T. SUP'T.	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
PRIMARY TREATMENT																
Region 1 - Southwest																
Owen Sound			1		3			1					.25			5.25
Point Edward			1		2											3.00
Region 2 - West Central																
Nanticoke (Port Dover)			.87		.87								.17			1.91
Region 3 - Central																
Midland			1		2											3.0
Region 4 - Southeast																
Cornwall	.7	1		0	4		1.7									7.40
Petawawa	.7				2		.7									3.40
Prescott			1		1											2.00
Region 5 - Northeast																
Espanola	.5				.5											1.0
Parry Sound	1				2											3.0
Sault Ste. Marie	.8	1			6		1	1								9.8
Timmins (Mattagami)	1				3		1						1			6.0
Region 6 - Northwest																
Fort Frances	.7				3											3.7
CONVENTIONAL ACTIVATED SLUDGE																
Region 1 - Southwest																
Chatham	1			1	7	1	1	1			1					13.00
Ingersoll			1		2								.25			3.25
St. Marys			1		1								.25			2.25
Tillsonburg			1		2								.25			3.25
Tuckersmith (Van Astra)			.5		.5								.25			1.25
Wallaceburg			1		3		1									5.00
Region 2 - West Central																
Brantford	1	1			10	1	2			1	1	1	.67			18.67
Cambridge (Galt)	1				4		1			1			.33			7.33
Cambridge (Preston)			1		3					1			.33			5.33
Delhi			.87		.87								.33			2.07
Dunnville			1		1		1									3.0
Fergus			.6		.7								.30			1.6
Haldimand (Caledonia)			1		1											2.0
Haldimand (Hagersville)			.67		.67								.17			1.51
Kitchener	1	1			9	1	3	1		1	1	3	1			22
Waterloo	1				4		2	1		1			.33			9.33
Woolwich (Elmira)			.75		.6								.40			1.75
Region 3 - Central																
Campbellford			.3	1	1											2.3
Mississauga (Lakeview)	1		2	10	23	1	11	2	2	2	7	1	2	2	4	70
Region 4 - Southeast																
Belleville	1	1			4	1				1						8.0
Kingston	.5				2.5		1			.5						4.5
Sidney (Batawa)			.20		.5											.7
Trenton	1				3		1									5.0
Region 5 - Northeast																
North Bay	1	1			5		2			1						10.0
Sturgeon Falls	.9				1									.5		2.4
Valley East (H., V.C. & V.T.)	.5				2		1	1								4.5

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASS'T SUP'T.	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
EXTENDED AERATION																
Region 1 - Southwest																
Dresden			1		2									1		4
Maidstone (Belle River)			1		2											3
Mildmay			1													1
Moore (Corunna)			1		1											2
Moore (Courtright)					1											1
Westminster			1										.5			1.5
Region 2 - West Central																
Elora			.4		.3								.1			.8
Paris			1													1
Wellesley			.1		.1									.5		.7
Wilmot (Baden)			.3		.3									.5		1.1
Region 3 - Central																
Alliston			.88		1.75											2.63
Coldwater			.3											1		1.3
Millbrook			.3											.5		.8
Mississauga (Clarkson)			1		4		1				1		1			8
Smith (Woodland Acres)			.1											.5		.6
Region 4 - Southeast																
Bancroft			1		1											2
Barry's Bay			.6		.6											1.2
Chalk River	.2				.45		.2									.85
Deseronto	.5				.5											1
Eganville			.6		.66											1.26
Ernestown (Odessa)			.4		.4											.8
Hawkesbury			.1		1											1.1
L'Original			.3		.5											.8
Marmora			.2		.8											1
Merrickville	.3				.75											1.05
Pittsburgh (Cana)					.5											.5
Region 5 - Northeast																
Black R.- Matheson (M.)	.75													.75		1.5
Latchford	.5				.5		.02						.25			1.27
Moosonee (North)	.25				.5								.05			.8
Rayside-Balfour(Azilda)	.5			.5	1								.19			2.19
Rayside-Balfour(Chelmsford)	.5			.5	1											2
Smooth Rock Falls	1												.2			1.2
Timmins(Whitney & Tisdale)	1				1								.5			2.5
Region 6 - Northwest																
Ear Falls	.2				1											1.2
Geraldton	.15				1											1.15
Ignace			.5		.5											1
Pickle Lake			.5										.5			1
Schreiber				1									.5			1.5
CONTACT STABILIZATION																
Region 3 - Central																
Port McNicoll			.3											1		1.3
Region 4 - Southeast																
Frankford			.4	1												1.4
Region 5 - Northeast																
Haileybury	.2			.5			.25						.29			1.24
Iroquois Falls	1			1												2
Kirkland Lake	1			2									.5			3.5
Moosonee (Old Townsite)	.25			.5									.1			.85
Region 6 - Northwest																
Longlac	.3			1												1.3
Red Lake	.2			1												1.2

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASST. SUP'T.	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
HIGH RATE ACTIVATED SLUDGE																
Region 1 - Southwest																
Meaford			1		1								.25			2.25
Region 2 - West Central																
Cambridge (Hespeler)			1		1								.33			2.33
Region 3 - Central																
Bradford			1		1											2
Region 4 - Southeast																
Carleton Place	.3				1											1.3
Region 5 - Northeast																
Sudbury	1	1		1	7		2	1		1			.3			14.3
OXIDATION DITCH																
Region 1 - Southwestern																
Paisley			1										.25			1.25
Southampton			.5		1											1.5
Region 2 - West Central																
Grand Valley			.5		.7		.3						.1			1.6
Haldimand (Cayuga)			.33		.33								.16			.82
Woolwich (St. Jacobs)			.15		.3								.5			.95
Region 3 - Central																
Fenelon Falls			.5		1											1.5
Hastings			.3		1											1.3
Norwood			.2		1											1.2
Region 5 - Northeastern																
Nickle Centre (Coniston)					1								.5			1.5
TERTIARY TREATMENT																
Region 1 - Southwest																
Stratford	1			1	4		1						.25			7.25
Region 2 - West Central																
Orangeville			.5		1.3		.7						.2			2.7
Simcoe	1				2.5		2						.17			5.67

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASS'T. SUP'T.	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
WASTE STABILIZATION PONDS																
Region 1 - Southwest																
Aylmer															.25	.25
Belmont															.25	.25
Chesley														.25		.25
Dover (Mitchell's Bay)															.20	.20
Dundalk														.25		.25
Dutton														.25		.25
East Zorra - Tavistock															.25	.25
Enniskillen (Oil City)														.25		.25
Essex N.E.														.17		.17
Essex S.W.														.17		.17
Forest														.25		.25
Glencoe														.25		.25
Gosfield N. (Cottam)														.25		.25
Harrow															.25	.25
Hensall														.25		.25
Lucan														.25		.25
Milverton														.25		.25
Mitchell														.25		.25
Moore (Brigden)														-		-
Norwich														.25		.25
Oil Springs														.25		.25
Port Stanley															.25	.25
Raleigh & Tilbury E. (Merlin)														-		
Ridgetown														.25		.25
Rodney														.25		.25
Sarnia (Bright's Grove)																
Seaforth														.25		.25
Sombra (Port Lambton)															.25	.25
Sombra (Port Sombra)															.25	.25
Tilbury W. (Comber)														.25		.25
Watford														.25		.25
West Lorne														.25		.25
Wiarton														.25		.25
Wingham															.25	.25
Zurich														.25		.25
Region 2 - West Central																
Arthur													.4			.4
Harriston	-															
Nanticoke (Jarvis)			.13		.13								.16			.42
Norfolk (Port Rowan)														.35		.35
Shelburne	-															
Wilmot (New Hamburg)	-															
Region 3 - Central																
Beeton			.12		.25											.37
Havelock			.1											1		1.10
Lakefield														1		1.00
Omemee			.2											1		1.20
Region 4 - Southeast																
Alfred			.1		.25											.35
Casselman			.25		.25											.5
Chesterville			.2		.2											.4
Gananoque	-															
Goulbourn (Richmond)	.1				.5											.6
Lancaster	.1				.2		.1									.4
Leeds & Lansdowne			.3										.1			.4
Madoc					.2											.2
Plantagenet			.1		.25											.35
Rockland			.1		.5											.6
St. Isidore de Prescott			.25		.25											.5
Stirling					.5											.5
Tweed					.5											.5
Vankleek Hill			.1		.25											.35
Westport			.25										.1			.35
Winchester			.3		.3											.60

PROJECT STAFF

PROJECT	SUPERINTENDENT	ASS'T. SUP'T.	CHIEF OPERATOR	SENIOR OPERATOR	OPERATOR	FOREMAN	MECHANIC	ELECTRICIAN	CONTROLS TECH.	LABORATORY TECH.	GROUNDSMAN/JANITOR	LABOURER	CASUAL	PART-TIME	OTHER	TOTAL
REGION 5 - Northeast																
Assiginack (Manitowaning)													.25			.25
Black R. - Matheson (Ramore)	.1													.1		.2
Black R. - Matheson (V.G.)	.05													.05		.1
Bruce Mines	.1				.5											.6
Burk's Falls													.35			.35
Caldwell (Verner)	.05				1.5											1.55
Englehart														.25		.25
Fauquier (Moonbeam)	.1												.1			.2
Haileybury (N. Cobalt)	.25				.2		.05						.05			.55
Hearst														.4		.4
Little Current	-															
Mattawa													.3			.3
Michipicoten (Wawa)	-															
New Liskeard	-															
N. Himsworth (Callander)														.4		.4
Powassan																
Ratter & Dunnet (Warren)													.15			.15
Shackleton & Machin (Fauquier)	.3													.07		.37
Sundridge																
Webbwood														.25		.25
Region 6 - Northwest																
Emo														.5		.50
Rainy River	.15												.5			.65
AERATED LAGOONS																
Region 1 - Southwest																
Durham															.25	.25
Kincardine					1											1.0
Listowel			1													1.0
Thornbury					1											1.0
Region 2 - West Central																
Nanticoke (Waterford)					.5								.16			.66
Region 4 - Southeast																
Alexandria	.1				.2		.1									.4
Almonte	.2				.5											.7

OPERATING COST SUMMARY - MECHANICAL PLANTS

OPERATING EXPENDITURES - MECHANICAL PLANTS

OPERATING EXPENDITURES - LAGOONS

The unit operating costs for mechanical sewage treatment plants are shown. Figures marked with an asterisk (*) are estimates based on less than twelve months of data.

OPERATING COST SUMMARY ---- MECHANICAL PLANTS

PROJECT	TOTAL OPERATING COST dollars	UNIT OPERATING COSTS		
		$ per Mil Gal	¢ per lb BOD rem	¢ per lb SS rem
PRIMARY TREATMENT				
Region 1 - Southwest				
Owen Sound	204957	121	22	9
Point Edward	54527	359	* 17	* 6
Region 2 - West Central				
Nanticoke (Port Dover)	78585	* 227	14	8
Region 3 - Central				
Midland	163616	237	* 52	* 15
Region 4 - Southeast				
Cornwall	401641	99		24
Petawawa	118429	624	90	92
Prescott	83871	* 268	* 120	* 38
Region 5 - Northeast				
Espanola	41363	233	34	26
Parry Sound	123816	328	62	29
Sault Ste. Marie	389686	110	20	12
Timmins (Mattagami)	181730	133	20	11
Region 6 - Northwest				
Fort Frances	133551	152	* 177	44
CONVENTIONAL ACTIVATED SLUDGE				
Region 1 - Southwest				
Chatham	505915	278	14	10
Ingersoll	128225	301	* 18	* 7
St. Marys	109897	529	18	25
Tillsonburg	143920	392	39	24
Tuckersmith (Van Astra)	49674	1113	278	246
Wallaceburg	253305	679	52	* 37
Region 2 - West Central				
Brantford	596614	168	11	08
Cambridge (Galt)	364175	188	14	12
Cambridge (Preston)	249862	410	07	11
Delhi	76137	462	34	26
Dunnville	122671	370	22	28
Fergus	72545	317	* 34	* 21
Haldimand (Caledonia)	70597	488	* 58	* 32
Haldimand (Hagersville)	58220	487	112	90
Kitchener	1017839	206	10	10
Waterloo	224003	102	5	4
Woolwich (Elmira)	69585	329	* 22	* 29
Region 3 - Central				
Campbellford	85781	182	* 30	21
Mississauga(Lakeview & Clarkson)	4517704	326	10	11
Region 4 - Southeast				
Belleville	437563	171	10	5
Kingston Twp.	186894	237	15	16
Sidney (Batawa)	23127	494	164	121
Trenton	309467	312	29	* 24
Region 5 - Northeast				
North Bay	443053	168	12	06
Sturgeon Falls	104990	220	33	28
Valley East (H., V.C. & V.T.)	193827	522	59	30

OPERATING COST SUMMARY ---- MECHANICAL PLANTS

PROJECT	TOTAL OPERATING COST dollars	UNIT OPERATING COSTS $ per Mil Gal	¢ per lb BOD rem	¢ per lb SS rem
EXTENDED AERATION				
Region 1 - Southwest				
Dresden	90889	2144	* 70	* 87
Maidstone (Belle River)	120378	1019	131	152
Mildmay	44160	3320	* 612	* 537
Moore (Corunna)	68288	624	57	52
Moore (Courtright)	40388	1951	* 155	* 180
Westminster	56902	448	34	23
Region 2 - West Central				
Elora	27804	* 1003	* 68	* 54
Haldimand (Cayuga)	32065	627	68	54
Paris	51934	323	* 21	* 24
Wellesley	29277	1006	* 107	121
Wilmot (Baden)	-	-	-	-
Region 3 - Central				
Alliston	101993	461	26	23
Coldwater	35812	1044	187	181
Millbrook	51557	* 1420	* 144	* 153
Smith (Woodland Acres)	17520	* 6738	* 1029	* 737
Region 4 - Southeast				
Bancroft	70524	1237	282	228
Barry's Bay	47049	1645	106	120
Chalk River	41734	1415	113	68
Deseronto	69887	1007	* 161	* 85
Eganville	40835	1184	98	80
Ernestown (Odessa)	33470	* 778	* 164	* 184
Hawkesbury	102520	* 308	* 561	* 116
L'Orignal	30357	* 726	* 181	* 97
Marmora	35744	1030	160	86
Merrickville	42821	1799	167	110
Pittsburgh (Cana)	25003	3747	470	347
Region 5 - Northeast				
Black R. - Matheson (M.)	44769	500	155	* 118
Latchford	20346	851	108	86
Moosonee (North)	23008	2397	* 451	* 178
Rayside-Balfour (Azilda)	69265	488	56	43
Rayside-Balfour (Chelmsford)	70655	281	29	13
Smooth Rock Falls	43622	373	* 46	58
Timmins (Whitney & Tisdale)	124586	382	* 59	34
Region 6 - Northwest				
Ear Falls	78043	1542	264	212
Geraldton	71696	536	* 120	* 97
Ignace	67582	1001	* 117	* 103
Pickle Lake	45055	N/A	N/A	N/A
Schreiber	42612	* 977	* 120	* 168
CONTACT STABILIZATION				
Region 3 - Central				
Port McNicoll	38531	522	62	37
Region 4 - Southeast				
Frankford	71003	637	* 164	* 98
Region 5 - Northeast				
Haileybury	46085	* 245	* 21	* 14
Iroquois Falls	86554	350	40	28
Kirkland Lake	163473	165	55	24
Moosonee (Old Townsite)	45370	1359	* 265	* 166
Region 6 - Northwest				
Longlac	47176	1077	* 158	* 96
Red Lake	31511	275	86	12

OPERATING COST SUMMARY ---- MECHANICAL PLANTS

PROJECT	TOTAL OPERATING COST dollars	UNIT OPERATING COSTS		
		$ per Mil Gal	¢ per lb BOD rem	¢ per lb SS rem
HIGH RATE ACTIVATED SLUDGE				
Region 1 - Southwest				
Meaford	84371	436	62	40
Region 2 - West Central				
Cambridge (Hespeler)	125839	360	18	24
Region 3 - Central				
Bradford	122117	573	33	16
Region 4 - Southeast				
Carleton Place	74151	151	96	36
Region 5 - Northeast				
Sudbury	699594	184	17	17
OXIDATION DITCH				
Region 1 - Southwestern				
Paisley	36555	1596	137	114
Southampton	72257	940	122	209
Region 2 - West Central				
Grand Valley	32511	1413	92	73
Woolwich (St. Jacobs)	-	-	-	-
Region 3 - Central				
Fenelon Falls	44786	650	80	67
Hastings	52110	* 3217	* 59	* 47
Norwood	45446	1116	101	73
Region 5 - Northeastern				
Nickel Centre (Coniston)	4667	386	4	5
TERTIARY TREATMENT				
Region 1 - Southwest				
Stratford	301724	191	21	13
Region 2 - West Central				
Orangeville	148573	251	28	18
Simcoe	118566	134	6	8

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	GRAND TOTAL	REGULAR STAFF	UNCLASS STAFF	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPT. AND COMMUN.	INSUR'CE	SLUDGE HAULAGE	REPAIRS AND MAINT'CE	OTHER SERVICES
PRIMARY TREATMENT										
Region 1 - Southwest										
Owen Sound	204,957	75,142	7,932	83,074	12,959	1,439	1,192	17,881	6,190	321
Point Edward *	54,527	23,348	1,562	22,013	8,132	781	726	3,495	291	(4,396)
Region 2 - West Central										
Nanticoke (Port Dover) *	78,585	32,903	3,447	35,892	5,769	1,022	1,162	180	406	159
Region 3 - Central										
Midland	163,616	43,045	1,578	44,623	8,265	3,588	838	29,231	8,952	1,284
Region 4 - Southeast										
Cornwall	401,641	130,754	1,895	129,446	24,535	7,286	2,207	39,658	18,235	8,890
Petawawa *	118,429	47,835	-	50,752	-	1,979	836	-	7,493	1,996
Prescott	83,871	35,186	-	35,186	5,630	683	789	894	1,165	2,418
Region 5 - Northeast										
Espanola	41,363	23,776	-	17,364	3,333	1,193	493	919	1,652	112
Parry Sound	123,816	50,714	-	50,714	8,141	1,708	790	1,392	7,433	421
Sault Ste. Marie	389,686	174,218	-	173,253	29,617	4,064	3,648	18,704	10,588	515
Timmins (Mattagami)	181,730	72,626	13,396	81,836	13,960	4,037	1,016	15,949	8,118	3,918
Region 6 - Northwest										
Fort Frances *	133,551	53,543	11,347	61,439	12,291	2,117	1,319	4,536	5,199	347
CONVENTIONAL ACTIVATED SLUDGE										
Region 1 - Southwest										
Chatham	505,915	185,695	9,602	195,297	30,538	7,933	3,277	50,684	35,870	2,244
Ingersoll *	128,225	51,880	5,235	57,115	8,598	1,891	1,474	5,453	602	712
St. Mary's	109,897	34,754	1,584	36,338	5,705	1,506	962	6,940	1,177	(12)
Tillsonburgh	143,920	49,634	2,393	52,073	8,497	3,071	973	6,248	6,787	6,555
Tuckersmith (Van Astra)	49,674	22,778	2,406	25,458	4,712	3,222	1,287	4,040	232	1,117
Wallaceburg *	253,305	71,883	2,044	73,511	13,910	4,540	1,769	27,066	33,183	(1,165)
Region 2 - West Central										
Brantford	596,614	246,060		245,646	46,981	3,613	4,144	(790)	24,408	32,927
Cambridge (Galt)	364,175	106,828	9,754	116,582	19,333	3,731	2,357	73,107	7,776	1,994
Cambridge (Preston)	249,862	89,897	3,085	90,010	27,028	2,144	1,065	28,203	1,671	3,217
Delhi	76,137	31,539	1,047	30,919	5,668	1,664	889	8,130	2,465	527
Dunnville	122,671	51,939	2,113	53,969	8,546	1,653	912	6,822	2,298	1,005
Fergus *	72,545	22,301	3,676	24,681	5,622	10,521	537	3,531	7,030	139
Haldimand(Caledonia) *	70,597	32,882	-	32,882	5,308	1,501	671	6,209	1,420	669
Haldimand(Hagersville)	58,220	26,889	2,543	23,970	5,842	41	425	2,811	170	1,035
Kitchener	1,017,839	320,421	8,469	328,890	53,910	5,717	9,660	245,032	4,027	5,683
Waterloo	224,003	45,194	2,248	46,776	5,768	3,035	2,817	24,677	866	690
Woolwich (Elmira) *	69,585	24,121	3,772	27,942	7,619	(298)	772	5,279	985	796
Region 3 - Central										
Campbellford *	85,781	37,905	10,301	48,206	6,655	3,335	834	3,231	3,505	159
Mississauga (Lakeview)	4,517,704	1,145,488	53,476	1,198,964	198,788	24,556	37,033	709,463	109,299	120,675
Region 4 - Southeast										
Belleville	437,563	150,087	-	148,720	25,161	864	2,952	63,478	30,863	4,779
Kingston	186,894	74,595	2,412	54,140	24,348	2,309	1,925	16,725	5,934	995
Sidney (Batawa)	23,127	14,163	285	14,448	1,394	504	205	-	-	30
Trenton *	309,467	79,290	1,791	81,081	13,194	2,742	4,238	69,594	6,185	509
Region 5 - Northeast										
North Bay	443,053	164,437	8,243	164,437	27,431	6,288	4,535	57,769	12,701	10,107
Sturgeon Falls	104,990	38,386	6,289	40,527	7,584	627	1,286	6,745	4,390	749
Valley East(H.V.C.&V.T.)	193,827	70,468	1,394	71,920	13,940	2,405	2,391	10,213	4,383	1,225

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	TOTAL SERVICES	MACHIN'RY AND EQUIPMENT	CHEMIC'LS	UTILITIES	OTHER SUPPLIES AND EQUIPM'NT	TOTAL SUPPLIES AND EQUIPM'NT	TOTAL ACQ/CON OF PHYS ASSETS	TOTAL TRANSF'R PAYM'NTS	OTHER TR'S'CTNS
PRIMARY TREATMENT									
Region 1 - Southwest									
Owen Sound	25,584	2,763	37,468	36,709	4,214	81,901	-	-	-
Point Edward	116	2,695	5,972	7,793	5,834	22,294	-	-	1,191
Region 2 - West Central									
Nanticoke (Port Dover)	1,907	922	16,669	11,965	4,439	33,995	-	-	-
Region 3 - Central									
Midland	40,305	7,913	38,926	16,421	66,802	38	-	-	-
Region 4 - Southeast									
Cornwall	68,990	30,409	70,565	44,134	25,731	170,839	288	-	257
Petawawa	10,325	16,660	15,729	2,181	20,803	55,373	-	-	-
Prescott	5,266	1,098	10,353	17,409	6,010	34,870	16	-	2,220
Region 5 - Northeast									
Espanola	3,176	1,183	3,250	5,121	6,743	16,297	-	-	-
Parry Sound	10,036	1,486	23,810	23,419	4,502	53,217	-	-	-
Sault Ste. Marie	33,455	2,663	33,231	85,993	14,354	136,241	-	-	13,056
Timmins (Mattagami)	29,001	6,058	297	39,271	7,270	52,896	-	-	-
Region 6 - Northwest									
Fort Frances	11,401	3,761	15,289	9,741	17,512	46,303	-	-	-
CONVENTIONAL ACTIVATED SLUDGE									
Region 1 - Southwest									
Chatham	92,075	4,580	48,396	108,120	18,976	180,072	-	-	-
Ingersoll	8,241	2,459	6,110	33,126	5,897	47,592	-	-	4,788
St. Mary's	9,067	6,739	5,675	17,947	4,493	34,854	19,423	-	3,004
Tillsonburgh	20,563	10,461	19,784	20,408	9,063	59,716	-	-	-
Tuckersmith (Van Astra)	6,676	1,336	510	4,553	2,944	9,343	-	-	263
Wallaceburg	60,853	17,729	25,235	33,147	19,691	95,802	-	-	4,689
Region 2 - West Central									
Brantford	60,689	742	83,961	119,056	16,712	220,471	-	-	19,214
Cambridge (Galt)	85,234	2,790	49,005	71,440	10,734	133,969	-	-	5,326
Cambridge (Preston)	34,156	9,346	21,955	48,233	12,649	93,183	-	-	3,341
Delhi	12,011	2,086	9,767	9,523	4,499	25,875	-	-	-
Dunnville	11,037	1,559	10,479	30,765	4,663	47,466	-	-	-
Fergus	11,237	3,335	4,934	10,704	1,511	20,484	-	-	-
Haldimand (Caledonia)	8,969	953	7,486	8,225	5,273	21,937	-	-	-
Haldimand (Hagersville)	4,441	2,782	5,930	6,167	9,047	23,926	-	-	-
Kitchener	264,402	11,645	115,054	184,934	45,687	357,320	-	-	7,600
Waterloo	29,050	1,627	36,333	94,075	7,339	139,374	-	-	-
Woolwich (Elmira)	7,832	893	9,322	12,126	2,577	25,518	-	-	972
Region 3 - Central									
Campbellford	7,729	34	1,687	14,342	3,793	19,856	-	-	-
Mississauga (Lakeview)	976,470	192,009	366,206	1,338,262	133,622	2,030,099	-	-	88,827
Region 4 - Southeast									
Belleville	102,072	911	43,691	70,432	21,590	136,624	-	-	24,122
Kingston	25,579	2,766	24,642	43,944	9,166	80,518	-	-	-
Sidney (Batawa)	235	(270)	1,428	4,195	1,193	6,546	-	-	-
Trenton	80,526	15,690	20,675	79,365	16,194	131,924	-	-	-
Region 5 - Northeast									
North Bay	85,112	7,936	33,056	95,628	6,289	142,909	-	-	16,876
Sturgeon Falls	13,170	197	8,270	26,516	3,070	38,053	-	-	5,029
Valley East(H., VC & VT)	18,212	12,374	9,601	52,491	9,381	83,847	297	-	3,206

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	GRAND TOTAL	REGULAR STAFF	UNCLASS. STAFF	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPT. AND COMMUN.	INSUR'CE	SLUDGE HAULAGE	REPAIRS AND MAINT'CE	OTHER SERVICES
EXTENDED AERATION										
Region 1 - Southwest										
Dresden *	90889	45096	2284	45448	10815	2473	1036	-	754	586
Maidstone(Belle River)	120378	47146	-	46476	8395	2174	1170	3618	86	(1071)
Mildmay *	44160	18106	117	18317	2617	4044	441	-	1824	614
Moore (Corunna)	68288	22103	-	20617	5583	1611	493	15382	2732	(3194)
Moore(Courtright) *	40388	21669	-	22496	2563	734	-	1475	494	1812
Westminster	56902	19689	14215	33904	3388	1263	322	1526	3767	423
Region 2 - West Central										
Elora *	27804	11512	214	13034	19	1575	272	1199	226	110
Haldimand (Cayuga)	32065	8852	420	15073	-	2307	196	39	85	496
Paris *	51934	21694	1150	23462	2950	2588	436	790	3735	475
Wellesley *	29277	3727	8477	12447	241	1618	221	2621	930	41
Wilmot (Baden)	-	-	-	-	-	-	-	-	-	-
Region 3 - Central										
Alliston	101993	43400	-	42151	7685	2401	538	19074	6177	687
Coldwater	35812	6618	10080	15484	2097	4850	65	1853	2390	491
Millbrook *	51557	11635	8313	19948	1067	2600	384	1062	823	256
Smith (Woodland Acres) *	17520	3115	6611	9726	520	405	-	-	110	246
Region 4 - Southeast										
Bancroft	70524	33454	-	33454	5449	2468	1028	(100)	607	221
Barry's Bay	47049	21226	1153	19009	5686	270	530	100	558	505
Chalk River	41734	9339	3997	8209	12893	856	438	-	195	746
Deseronto *	69887	28656	1520	30176	5795	(955)	496	-	216	983
Eganville *	40835	21387	1107	17788	5469	1571	371	2414	940	870
Ernestown (Odessa) *	33470	6475	658	9947	-	342	474	-	2282	1217
Hawkesbury *	102520	49918	279	46225	8411	1674	1026	-	134	3324
L'Orignal *	30357	7682	397	9406	1161	455	563	-	272	(567)
Marmora	35744	15718	48	15766	844	3056	640	1179	392	316
Merrickville	42821	22152	-	21647	5704	772	282	884	1327	836
Pittsburgh (Cana)	25003	13644	-	13644	-	1064	141	-	2020	250
Region 5 - Northeast										
Black R. - Matheson(M) *	44769	15334	4903	20237	2678	1822	318	1279	1695	146
Latchford	20346	10426	-	10426	1283	629	202	420	-	-
Moosonee (North) *	23008	8460	340	8800	1000	214	494	-	-	-
Rayside-Balfour (Azilda)	69265	35772	-	35923	5313	1411	939	1452	1187	793
Rayside-Balfour(Chelmsford)	70655	33833	-	33833	5758	922	-	2832	1816	765
Smooth Rock Falls *	43622	18942	4250	23192	3072	1459	488	1675	275	310
Timmins(Whitney & Tisdale)*	124586	35911	11158	47069	6014	3525	1118	12312	908	1007
Region 6 - Northwest										
Ear Falls	78043	36320	5137	39469	8425	1957	369	350	2905	367
Geraldton *	71696	22825	3178	26003	-	4092	348	630	5800	1166
Ignace *	67582	24834	-	24834	5230	2655	623	-	10509	664
Pickle Lake *	45055	10974	5738	16712	2801	755	46	-	1628	13725
Schreiber *	42612	19177	2963	22140	3071	1585	541	735	448	1955
CONTACT STABILIZATION										
Region 3 - Central										
Port McNicoll	38531	5129	12549	18245	878	1542	253	2590	5824	315
Region 4 - Southeast										
Frankford *	71003	23099	965	24064	11830	9851	605	819	403	691
Region 5 - Northeast										
Haileybury *	46085	19437	1996	21433	4265	714	438	1440	1560	-
Iroquois Falls	86554	34901	2382	37283	5828	1042	882	13676	3531	354
Kirkland Lake	163473	53734	3696	57430	8423	2980	1628	22300	15095	407
Moosonee (Old Townsite) *	45370	17344	2378	19722	3864	145	572	-	1047	129
Region 6 - Northwest										
Longlac *	47176	18333	4894	23227	1699	612	267	840	1453	4055
Red Lake	31511	16621	(4432)	9707	(95)	1999	518	-	1181	429

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	TOTAL SERVICES	MACHIN'RY AND EQUIPMENT	CHEMIC'LS	UTILITIES	OTHER SUPPLIES AND EQUIPM'NT	TOTAL SUPPLIES AND EQUIPM'NT	TOTAL ACQ/CON OF PHYS ASSETS	TOTAL TRANSF'R PAYM'NTS	OTHER TR'S'CT'NS
EXTENDED AERATION									
Region 1 - Southwest									
Dresden	2376	2537	3244	11485	9931	27197	-	-	2580
Maidstone (Belle River)	3803	21416	6213	25774	6127	59530	-	-	-
Mildmay	2879	3759	1471	7410	3212	15852	102	-	349
Moore (Corunna)	15413	706	5125	15055	3255	24141	-	-	923
Moore (Courtright)	3781	2467	1588	6229	389	10673	7	-	134
Westminster	6038	310	759	6549	4691	12309	-	-	-
Region 2 - West Central									
Elora	1807	579	2265	5634	2891	11369	-	-	-
Haldimand (Cayuga)	816	1815	3065	5253	3105	13238	-	-	631
Paris	5436	1449	5286	9626	1137	17498	-	-	-
Wellesley	3813	214	2164	4750	3789	10917	-	-	241
Wilmot (Bayden)	-	-	-	-	-	-	-	-	-
Region 3 - Central									
Alliston	26476	5487	786	11135	5524	22932	171	-	177
Coldwater	4799	2544	8	5138	845	8535	47	-	-
Millbrook	2525	8391	2522	5651	8268	24862	-	-	555
Smith (Woodland Acres)	356	427	1	5144	941	6513	-	-	-
Region 4 - Southeast									
Bancroft	1756	1317	910	12280	9233	23740	-	-	3657
Barry's Bay	1693	2409	3618	5810	8160	19997	-	-	394
Chalk River	1379	6938	314	5677	5404	18333	-	-	64
Deseronto	1695	6202	2142	8098	2019	18461	-	-	14715
Eganville	4595	1165	324	5197	4607	11293	36	-	83
Ernestown (Odessa)	3973	2277	1066	10433	5432	19208	-	-	-
Hawkesbury	4484	2088	1887	26077	8552	38604	-	-	3122
Marmora	2527	1091	3659	7086	1060	12896	-	-	655
L'Original	268	1702	48	15422	1792	18964	-	-	103
Merrickville	3329	441	1968	5709	3237	11355	-	-	14
Pittsburgh (Cana)	2411	1168	4	3527	3185	7884	-	-	-
Region 5 - Northwest									
Black R. - Matheson (M.)	3438	606	338	12177	3031	16152	-	-	442
Latchford	622	85	667	4493	163	5408	-	-	1978
Moosonee (North)	494	1138	55	3813	7494	12500	-	-	-
Rayside-Balfour (Azilda)	4371	4001	576	15718	1952	22247	-	-	-
Rayside-Balfour(Chelmsford)	5413	3774	797	16495	3663	24729	-	-	-
Smooth Rock Falls	2748	1511	669	8747	2224	13151	-	-	-
Timmins(Whitney & Tisdale)	15345	6510	2695	36984	6444	52633	-	-	-
Region 6 - Northwest									
Ear Falls	3991	711	7492	11497	4501	24201	-	-	-
Geraldton	7944	2453	3557	17355	8300	31665	-	-	1992
Ignace	11796	4149	6493	7549	4876	23067	-	-	-
Pickle Lake	15399	3502	720	32	5134	9388	-	-	-
Schreiber	3679	758	1223	7212	1747	10940	-	-	1197
CONTACT STABILIZATION									
Region 3 - Central									
Port McNicoll	8982	638	1678	5414	1146	8876	-	-	8
Region 4 - Southeast									
Frankford	2518	1341	3757	8148	7665	20911	-	-	1829
Region 5 - Northeast									
Halleybury	3438	1857	2804	9136	1156	14953	-	-	1282
Iroquois Falls	18443	2629	1225	15782	3287	22923	-	-	1035
Kirkland Lake	39430	3655	4352	41274	5929	55210	-	-	-
Moosonee (Old Townsite)	1748	2518	546	7749	6358	17171	-	-	2720
Region 6 - Northwest									
Longlac	6615	1149	1539	9419	2916	15023	-	-	-
Red Lake	2128	1197	1522	9364	2880	14963	1000	-	1809

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	GRAND TOTAL	REGULAR STAFF	UNCLASS STAFF	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPT AND COMMUN.	INSUR'CE	SLUDGE HAULAGE	REPAIRS AND MAINT'CE	OTHER SERVICES
HIGH RATE ACTIVATED SLUDGE										
Region 1 - Southwest										
Meaford	84371	36707	1614	38321	7039	3284	873	3023	3186	(1223)
Region 2 - West Central										
Cambridge (Hespeler)	125839	41752	2047	46976	5401	2494	697	13026	806	138
Region 3 - Central										
Bradford	122117	35203	901	36172	5646	2641	738	9145	10402	864
Region 4 - Southeast										
Carleton Place	74151	33455	-	31102	5813	980	586	602	3041	1396
Region 5 - Northeast										
Sudbury	699594	230559	-	230319	39335	2461	9803	67638	7493	2178
OXIDATION DITCH										
Region 1 - Southwestern										
Paisley	36555	18298	1916	20214	2928	1738	268	806	80	321
Southampton	72257	32545	33	30478	8282	2962	541	2343	142	(2161)
Region 2 - West Central										
Grand Valley	32511	12343	-	16624	-	2013	223	4752	74	1735
Woolwich (St. Jacobs)	-	-	-	-	-	-	-	-	-	-
Region 3 - Central										
Fenelon Falls	44786	17859	-	17859	3666	1282	441	2631	871	1276
Hastings *	52110	21812	-	21812	3388	1527	519	6935	1845	527
Norwood	45446	20131	-	20131	2953	1460	57	4450	2992	768
Region 5 - Northeastern										
Nickel Centre (Coniston)	46671	16796	6474	23482	2797	1702	1015	859	831	457
TERTIARY										
Region 1 - Southwest										
Stratford	301724	111207	1290	112563	19195	4172	2253	28411	4120	771
Region 2 - West Central										
Orangeville	148573	54316	2119	51887	11130	1149	782	25242	562	311
Simcoe	118566	33676	-	31615	3340	1240	1477	4993	1455	950

OPERATING EXPENDITURES ---- MECHANICAL PLANTS

PROJECT	TOTAL SERVICES	MACHIN'RY AND EQUIPMENT	CHEMIC'LS	UTILITIES	OTHER SUPPLIES AND EQUIPM'NT	TOTAL SUPPLIES AND EQUIPM'NT	TOTAL ACQ/CON OF PHYS ASSETS	TOTAL TRANSF'R PAYM'NTS	OTHER TR'S'CT'NS
HIGH RATE ACTIVATED SLUDGE									
Region 1 - Southwest									
Meaford	5859	2810	259	22234	4565	29868	-	-	-
Region 2 - West Central									
Cambridge (Hespeler)	15473	3029	9592	37148	4065	53832	-	-	1663
Region 3 - Central									
Bradford	21149	1752	13312	28555	12890	56509	-	-	-
Region 4 - Southeast									
Carleton Place	5625	2120	5489	17178	4673	29460	-	-	1171
Region 5 - Northeast									
Sudbury	87112	19467	26319	271584	22212	339582	-	-	785
OXIDATION DITCH									
Region 1 - Southwestern									
Paisley	1475	2351	1460	4460	1840	10111	-	-	89
Southampton	865	9284	1275	11862	6579	29000	-	-	670
Region 2 - West Central									
Grand Valley	6784	502	1569	3365	1641	7067	23	-	-
Woolwich (St. Jacobs)	-	-	-	-	-	-	-	-	-
Region 3 - Central									
Fenelon Falls	5219	2435	1830	9149	2702	16116	-	-	644
Hastings	9826	449	2517	7648	4097	14711	96	-	750
Norwood	5267	5801	1559	5083	2553	14996	-	-	639
Region 5 - Northeastern									
Nickel Centre (Coniston)	3162	1313	2335	7621	1060	12329	-	-	3199
TERTIARY									
Region 1 - Southwest									
Stratford	35555	28486	34819	43880	10058	117243	377	-	12619
Region 2 - West Central									
Orangeville	26897	2350	21377	26701	6069	56497	-	-	1013
Simcoe	8875	7716	24882	35444	5847	73889	-	-	(393)

OPERATING EXPENDITURES ---- LAGOONS

PROJECT	GRAND TOTAL	REGULAR STAFF	UNCLASS. STAFF	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPT. AND COMMUN.	INSUR'CE	SLUDGE HAULAGE	REPAIRS AND MAINT'CE	OTHER SERVICES
WASTE STABILIZATION PONDS										
Region 1 - Southwest										
Aylmer *	40,505	14,364	-	15,786	49	753	142	236	259	3,632
Belmont *	14,471	8,959	-	9,342	-	118	92	136	775	1,863
Chesley *	2,238	312	-	312	-	102	82	-	232	-
Dover(Mitchell's Bay) *	1,650	790	-	834	-	76	51	-	-	-
Dundalk *	8,596	1,165	-	1,249	12	425	56	-	2,085	2,020
Dutton *	9,741	(487)	6,836	6,391	243	213	41	-	-	212
East Zorra -(Tavistock) *	7,551	1,319	-	1,487	8	537	75	-	126	419
Enniskillen (Oil City) *	21,139	-	13,838	13,925	447	200	22	-	-	71
Essex N.E. *	35,039	3,724	80,004	13,130	371	1,458	162	-	1,352	1,889
Essex S.W.										
Forest *	8,695	1,102	4,587	5,982	224	229	46	-	201	150
Glencoe *	14,237	413	5,756	6,253	267	111	126	-	3,052	573
Gosfield N.(Cottam) *	5,007	246	2,686	2,975	141	11	63	-	104	532
Harrow *	20,759	8,903	-	9,461	35	537	264	-	110	2,547
Hensall *	16,089	592	-	592	-	100	53	-	11,919	300
Lucan *	3,638	718	-	718	-	64	55	-	1,316	60
Milverton *	20,189	1,504	6,481	7,985	266	233	31	-	514	198
Mitchell *	25,466	1,936	3,907	5,969	155	598	66	-	390	6,318
Moore (Brigden) *	3,459	2,025	-	2,248	-	61	37	-	133	605
Norwich *	18,851	3,387	4,206	7,593	202	581	124	-	3,299	30
Oil Springs *	2,007	-	-	-	-	-	49	-	-	1,008
Port Stanley *	39,618	15,154	-	16,450	38	614	607	260	970	9,798
Raleigh & Tilbury E.(Merlin)	6,579	-	5,160	5,160	242	-	87	-	72	-
Ridgetown *	13,691	767	5,486	6,337	228	500	115	-	975	303
Rodney *	9,246	892	4,891	5,825	230	206	29	-	-	112
Sarnia(Bright's Grove) *	18,846	9,387	-	10,409	-	408	108	-	-	1,779
Seaforth *	20,972	1,933	5,540	7,599	261	612	144	-	217	1,148
Sombra (Port Lambton) *	14,433	3,763	-	4,199	-	136	250	-	268	1,072
Sombra (Port Sombra) *	-	-	-	-	-	-	-	-	-	-
Tilbury W. (Comber) *	17,496	2,933	3,968	7,064	13	388	98	-	6,102	569
Watford *	6,594	138	4,507	4,678	213	43	71	-	-	89
West Lorne *	11,971	841	6,375	7,300	299	353	31	-	575	105
Wiarton *	13,668	429	4,387	4,816	52	134	96	-	2,620	40
Wingham *	4,114	682	-	682	-	365	99	-	956	-
Zurich *	7,724	145	-	145	-	14	41	-	6,243	18
Region 2 - West Central										
Arthur *	15,398	305	-	5,926	243	287	155	-	2,222	166
Harriston *	2,212	90	-	90	-	18	98	-	383	57
Nanticoke (Jarvis) *	8,134	2,428	-	2,886	6	501	22	-	21	247
Norfolk(Port Rowan) *	8,659	71	5,307	5,481	260	115	36	-	180	1,016
Shelburne	1,676	728	-	728	-	29	73	-	-	386
Wilmot (New Hamburg) *	10,265	197	-	197	6	331	68	-	1,006	269
Region 3 - Central										
Beeton *	10,813	2,652	-	3,388	184	331	85	-	945	95
Havelock *	14,241	1,649	8,737	10,386	620	27	138	-	244	75
Lakefield *	28,071	939	10,564	11,503	499	452	229	-	2,996	354
Omemee *	15,410	222	9,246	9,468	427	60	165	-	1,218	116

OPERATING EXPENDITURES ---- LAGOONS

PROJECT	TOTAL SERVICES	MACHIN'RY AND EQUIPMENT	CHEMIC'LS	UTILITIES	OTHER SUPPLIES AND EQUIPM'NT	TOTAL SUPPLIES AND EQUIPM'NT	TOTAL ACQ/CON OF PHYS ASSETS	TOTAL TRANSF'R PAYM'NTS	OTHER TR'S'CT'NS
WASTE STABILIZATION PONDS									
Region 1 - Southwest									
Aylmer	4,269	767	7,838	9,379	1,330	19,314	-	-	334
Belmont	2,866	-	-	826	1,157	1,983	-	-	162
Chesley	314	-	-	1,386	124	1,510	-	-	-
Dover (Mitchell's Bay)	51	-	-	355	124	479	-	-	210
Dundalk	4,161	-	2,224	-	263	2,507	65	-	177
Dutton	253	39	1,148	939	318	2,444	-	-	197
East Zorra - Tavistock	620	51	4,460	-	388	4,899	-	-	-
Enniskillen (Oil City)	93	-	5,781	302	374	6,457	-	-	17
Essex N.E.	3,403	5,346	7,310	2,373	574	15,603	29	-	1,045
Essex S.W.									
Forest	397	324	-	1,006	529	1,859	-	-	4
Glencoe	3,751	729	1,166	844	262	3,001	-	-	854
Gosfield N. (Cottam)	699	346	-	590	62	998	-	-	183
Harrow	2,921	247	2,805	2,943	1,800	7,795	10	-	-
Hensall	12,272	39	-	1,749	202	1,990	-	-	1,135
Lucan	1,431	456	-	817	152	1,425	-	-	-
Milverton	743	1,212	5,060	10	2,173	8,455	-	-	2,507
Mitchell	6,774	264	6,756	3,757	881	11,658	-	-	312
Moore (Brigden)	775	-	-	153	124	277	-	-	98
Norwich	3,453	762	3,875	1,632	351	6,620	-	-	402
Oil Springs	1,057	-	-	553	63	616	-	-	334
Port Stanley	11,635	-	2,189	5,228	1,751	9,168	77	-	1,636
Raleigh & Tilbury E. (Merlin)	159	72	-	765	181	1,018	-	-	-
Ridgetown	1,393	375	1,221	2,483	832	4,911	-	-	322
Sarnia (Bright's Grove)	1,887	341	-	4,884	299	5,524	-	-	618
Rodney	141	209	1,178	821	153	2,361	-	-	483
Seaforth	1,509	2,150	4,582	3,186	729	10,647	-	-	344
Sombra (Port Lambton)	1,590	2,050	1,350	4,552	170	8,122	9	-	377
Sombra (Port Sombra)	-	-	-	-	-	-	-	-	-
Tilbury W. (Comber)	6,769	527	1,279	796	660	3,262	-	-	-
Watford	160	272	-	1,023	192	1,487	-	-	13
West Lorne	711	39	2,323	551	395	3,308	-	-	-
Wiarton	2,756	226	153	5,076	359	5,814	-	-	116
Wingham	1,055	-	-	1,834	178	2,012	-	-	-
Zurich	6,302	39	-	664	124	827	-	-	436
Region 2 - West Central									
Arthur	2,543	682	3,849	1,446	389	6,366	-	-	33
Harriston	538	-	-	1,566	-	1,566	-	-	-
Nanticoke (Jarvis)	290	-	3,265	662	524	4,451	-	-	-
Norfolk (Port Rowan)	1,232	-	214	704	157	1,075	-	-	496
Shelburne	459	323	137	-	-	460	-	-	-
Wilmot (New Hamburg)	1,343	306	4,009	3,639	292	8,246	-	-	142
Region 3 - Central									
Beeton	1,125	2,548	34	1,760	1,333	5,675	-	-	110
Havelock	457	338	-	1,797	537	2,672	-	-	79
Lakefield	3,579	1,646	5,882	3,761	749	12,038	-	-	-
Omemee	1,499	773	-	2,312	543	3,628	-	-	328

OPERATING EXPENDITURES ---- LAGOONS

PROJECT	GRAND TOTAL	REGULAR STAFF	UNCLASS. STAFF	TOTAL SALARIES AND WAGES	TOTAL EMPLOYEE BENEFITS	TOTAL TRANSPT. AND COMMUN.	INSUR'CE	SLUDGE HAULAGE	REPAIRS AND MAINT'CE	OTHER SERVICES
Region 4 - Southeast										
Alfred *	11,344	5,851	7	6,973	27	1,316	57	-	150	277
Chesterville *	19,885	11,135	-	5,418	5,421	1,112	53	-	259	565
Casselman *	12,398	3,832	-	4,126	-	422	694	-	110	143
Gananoque *	21,602	-	-	-	-	-	250	-	-	10
Goulbourn (Richmond) *	17,290	5,489	-	6,802	-	2,140	113	-	246	1,270
Lancaster *	11,841	4,184	-	5,172	-	(377)	174	-	416	(142)
Leeds & Lansdowne *	14,681	4,992	1,698	9,045	-	721	254	-	216	765
Madoc *	4,717	3,183	-	3,185	-	412	-	-	-	180
Plantagenet *	14,960	7,797	14	8,742	15	1,296	158	-	159	412
Rockland *	11,887	5,787	83	7,454	-	518	65	-	1,349	145
St. Isidore de Prescott*	9,398	2,790	-	3,102	-	515	172	-	57	211
Stirling *	7,735	127	-	127	-	4	119	-	411	976
Tweed *	11,741	1,619	-	2,142	-	1,455	-	-	307	198
Vankleek Hill *	16,471	5,644	397	6,729	1,160	831	380	-	2,444	174
Westport *	13,780	7,750	2,551	5,642	3,044	227	611	-	166	10
Winchester *	17,181	8,004	2,508	10,512	-	658	272	-	-	1,217
Region 5 - Northeast										
Assiginack(Manitowaning)*	10,539	530	3,745	4,275	381	669	105	-	76	45
Black R.-Matheson(Ramore)*	-	-	-	-	-	-	-	-	-	-
Black R.-Matheson (V.G.) *	-	-	-	-	-	-	-	-	-	-
Bruce Mines *	12,649	5,339	-	5,524	2,562	(40)	110	-	1,178	184
Burk's Falls *	9,950	65	4,782	4,847	226	218	164	-	124	20
Caldwell (Verner) *	26,135	19,288	-	19,392	2,557	23	142	-	387	163
Englehart	5,309	-	3,679	3,679	181	189	73	-	-	115
Fauquier (Moonbeam) *	2,184	-	-	-		78	21	-	865	-
Haileybury (N. Cobalt) *	5,172	-	-	-	480	124	80	-	-	-
Hearst *	23,709	-	6,848	6,848	306	691	145	-	2,424	73
Little Current *	2,090	206	-	206	-	-	45	-	-	-
Mattawa *	2,533	-	-	-	-	-	121	-	-	-
Michipicoten (Wawa) *	523	415	-	415	-	7	82	-	-	-
New Liskeard *	704	-	-	-	-	-	322	-	-	5
N. Himsworth (Callander)*	6,160	79	-	79	-	200	138	-	-	-
Powasson *	2,863	622	-	622	-	12	25	-	-	235
Ratter & Dunnet (Warren)*	6,166	1,237	2,906	4,143	-	266	124	-	325	55
Shackleton & Machin(Fauquier)	2,938	-	-	-	-	-	48	-	-	40
Sundridge *	9,275	83	4,383	4,466	171	618	142	-	20	715
Webbwood *	5,394	116	4,020	4,136	198	134	66	-	138	11
Region 6 - Northwest										
Emo *	11,423	1,390	1,070	2,460	-	86	69	-	1,296	37
AERATED LAGOONS										
Region 1 - Southwest										
Durham	10,418	210	-	210	-	17	103	-	4,954	73
Kincardine	40,264	17,261	619	17,849	2,539	2,456	884	-	883	1,791
Listowel *	70,138	17,411	-	17,411	2,862	2,092	132	-	1,689	6,887
Thornbury *	40,029	16,296	-	16,296	1,197	901	187	-	614	2,115
Region 2 - West Central										
Nanticoke (Waterford) *	23,888	5,924	-	7,525	-	2,109	432	-	505	2,282
Region 4 - Southeast										
Alexandria *	21,577	7,111	-	8,182	-	1,047	206	-	85	379
Almonte *	19,786	5,452	-	6,550	-	1,124	166	-	2,486	525

OPERATING EXPENDITURES ---- LAGOONS

PROJECT	TOTAL SERVICES	MACHIN'RY AND EQUIPMENT	CHEMIC'LS	UTILITIES	OTHER SUPPLIES AND EQUIPM'NT	TOTAL SUPPLIES AND EQUIPM'NT	TOTAL ACQ/CON OF PHYS ASSETS	TOTAL TRANSF'R PAYM'NTS	OTHER TR'S'CT'NS
Region 4 - Southeast									
Alfred	484	32	249	543	1,646	2,470	-	-	74
Casselman	947	3,193	19	1,690	2,001	6,903	-	-	-
Chesterville	877	637	18	1,700	2,352	4,707	2,295	-	55
Gananoque	260	-	204	18,261	1,337	19,802	-	-	249
Goulbourn (Richmond)	1,629	917	1,175	1,925	1,836	5,853	30	-	836
Lancaster	448	3,025	-	1,260	2,290	6,575	-	-	23
Leeds & Lansdowne	1,235	9	-	1,914	1,637	3,560	-	-	120
Madoc	180	-	648	108	168	924	-	-	18
Plantagenet	729	361	-	2,006	1,811	4,178	-	-	-
Rockland	1,559	86	56	23	2,126	2,291	-	-	65
St. Isidore de Prescott	440	2,000	20	1,078	1,776	4,874	-	-	467
Stirling	1,506	-	1,360	3,932	764	6,056	-	-	42
Tweed	505	642	1,360	4,141	1,487	7,630	-	9	-
Vankleek Hill	2,998	12	-	2,132	1,494	3,638	-	-	1,115
Westport	787	154	1,393	1,090	1,378	4,015	-	-	65
Winchester	1,489	108	-	1,082	2,939	4,129	373	-	20
Region 5 - Northeast									
Assiginack (Manitowaning)	226	1,635	250	1,144	1,920	4,954	-	-	34
Black R.-Matheson (Ramore)	-	-	-	-	-	-	-	-	-
Black R.-Matheson (V.G.)	-	-	-	-	-	-	-	-	-
Bruce Mines	1,472	31	341	2,225	419	3,016	-	-	115
Burks Falls	308	244	-	2,184	1,923	4,351	-	-	-
Caldwell (Verner)	692	-	155	2,433	647	3,235	-	-	236
Englehart	188	-	-	897	100	997	75	-	-
Fauquier (Moonbeam)	886	211	543	417	49	1,220	-	-	-
Haileybury (N. Cobalt)	80	-	-	1,545	2,360	3,905	360	-	223
Hearst	2,642	262	-	11,423	1,527	13,212	-	-	10
Little Current	45	85	-	1,579	175	1,839	-	-	-
Mattawa	121	185	-	2,187	13	2,385	-	-	27
Michipicoten (Wawa)	82	-	-	-	19	19	-	-	-
New Liskeard	327	-	-	220	157	377	-	-	-
N. Himsworth (Callander)	138	-	-	4,279	1,201	5,480	107	-	156
Powasson	260	525	-	1,228	216	1,969	-	-	-
Ratter & Dunnet (Warren)	504	-	-	852	327	1,179	-	-	74
Shackleton & Machin(Fauquier)	88	-	153	1,569	1,128	2,850	-	-	-
Sundridge	877	989	2	2,074	73	3,138	-	-	5
Webbwood	215	-	-	526	131	657	-	-	54
Region 6 - Northwest									
Emo	1,402	462	-	4,401	1,362	6,225	1,250	-	-
AERATED LAGOONS									
Region 1 - Southwest									
Durham	5,130	-	-	4,914	124	5,038	-	-	23
Kincardine	3,558	1,428	615	10,010	1,809	13,862	-	-	-
Listowel	8,708	117	13,797	14,558	9,453	37,925	-	-	1,140
Thornbury	2,916	2,920	-	11,667	3,778	18,365	18	-	336
Region 2 - West Central									
Nanticoke (Waterford)	3,219	142	2,555	7,633	667	10,997	-	-	38
Region 4 - Southeast									
Alexandria	670	1,743	-	8,401	1,534	11,678	-	-	-
Almonte	3,177	774	-	6,092	2,069	8,935	-	-	-

PRIMARY TREATMENT PLANTS

Ministry of the Environment
Ontario

Southwestern Region

(1)

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
1180 20th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Clinton
c/o Ministry of
Agriculture & Food
519-482-3428

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
Lake Erie
WINDSOR

OWEN SOUND

PROJECT	City of Owen Sound WPCP
PROJECT NO.	2-0069-60
TREATMENT	Primary
DESIGN FLOW	3.0 M.G.D.
DESIGN POPULATION	25,000
BOD - Raw Sewage	180 mg/l
- Removal	40%
SS - Raw Sewage	200 mg/l
- Removal	65%

SEWAGE PUMPING STATION

Screening

- 1 3/4" spacing

Pumps

Type: Worthington
Size: Three 3150 gpm @ 33'tdh
(One diesel standby)

PRIMARY TREATMENT

Comminution

Type: Barminutor
Size: One Model C (36")

Grit Removal

Type: Aerated
Size: One 18½x13x12'(18,000 gal)
Retention: 8.6 min

Pre-aeration Tank

Size: One 23'9"x13x12'
(23,400 gal)
Retention: 11.2 min

Air Supply

Type: Sutorbilt
Size: Two 408 scfm @ 6 psi

Primary Sedimentation

Type: Rex Linkbelt
Size: Two 78x32x12½'
(388,000 gal)
Retention: 3.11 hr
Loading:
Surface, 600 gal/ft^2/day
Weir, 8,260 gal/ft/day

CHLORINATION

Type: W & T
Size: One 2000 lb/day

Chlorine Contact Chamber

Size: One 31x14x8'(21,700 gal)
Retention: 11.2 min

OUTFALL - 828' to Owen Sound

SLUDGE HANDLING

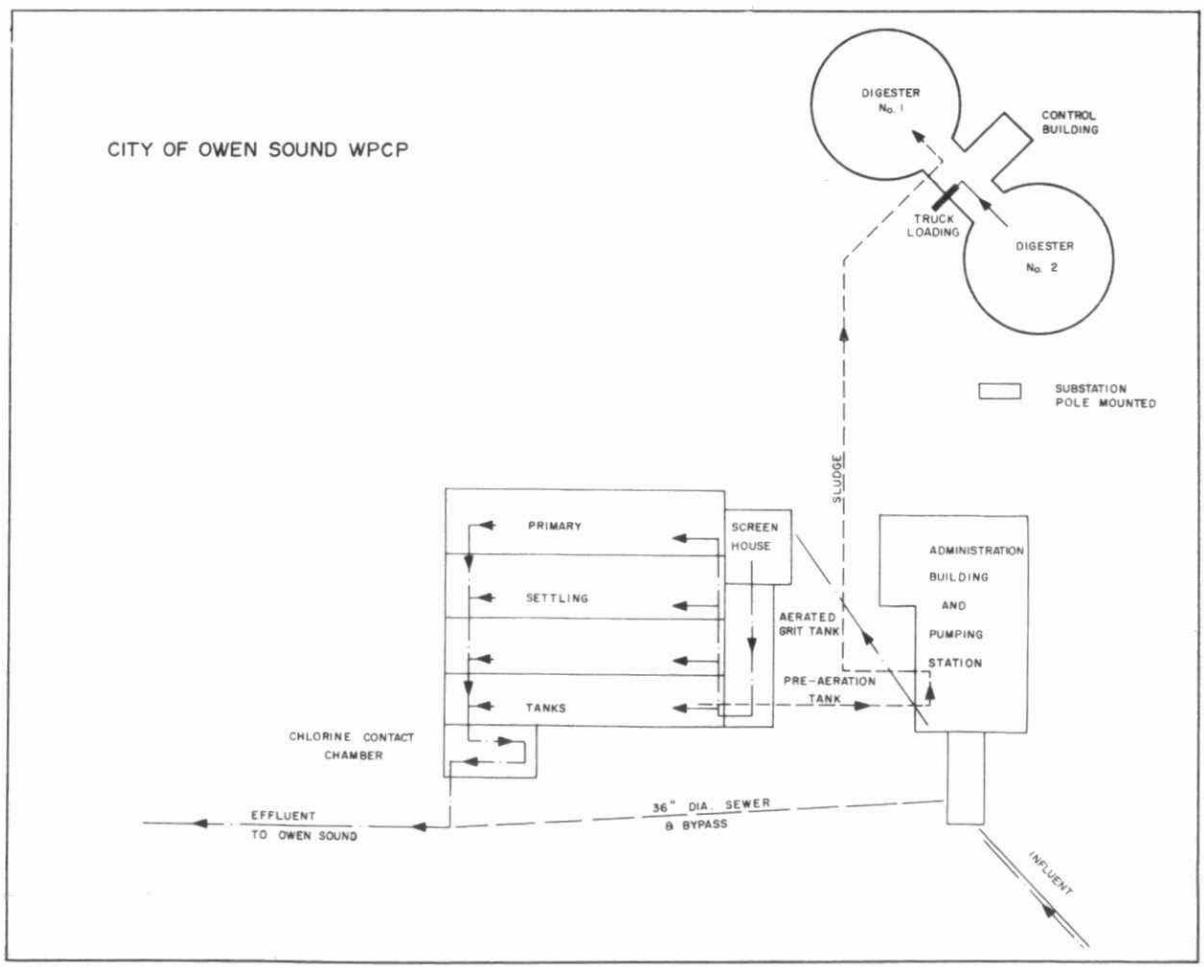
Digestion System - Two-stage

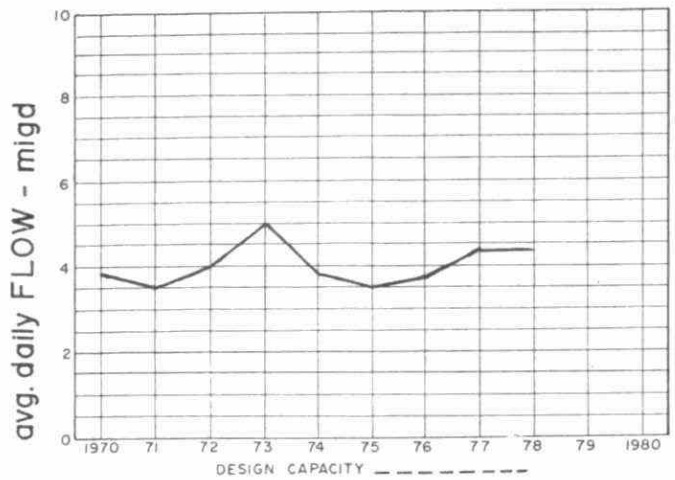
Primary --
Type: PFT with one Sutorbilt compressor
Size: One 40' diax25' swd (31,400 cu ft or 0.196 mil gal)
Loading: 2.75 lb/cu ft/mo

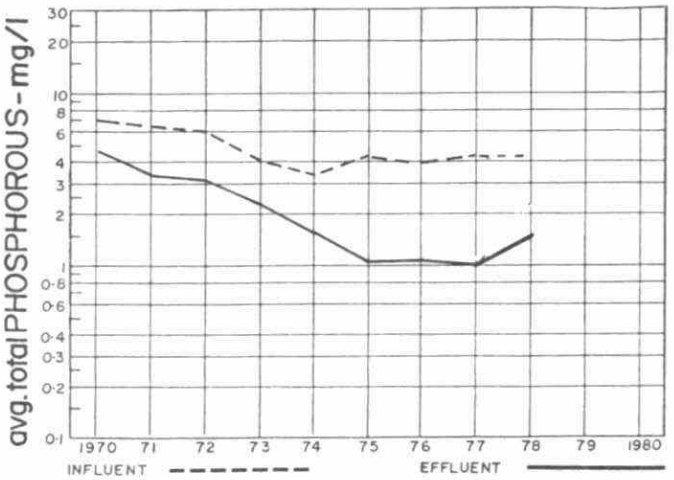
Secondary --
Size: One 40'diax24½' swd (30,800 cu ft or 0.192 mil gal)
Total Loading:
1.88 lb/cu ft/mo

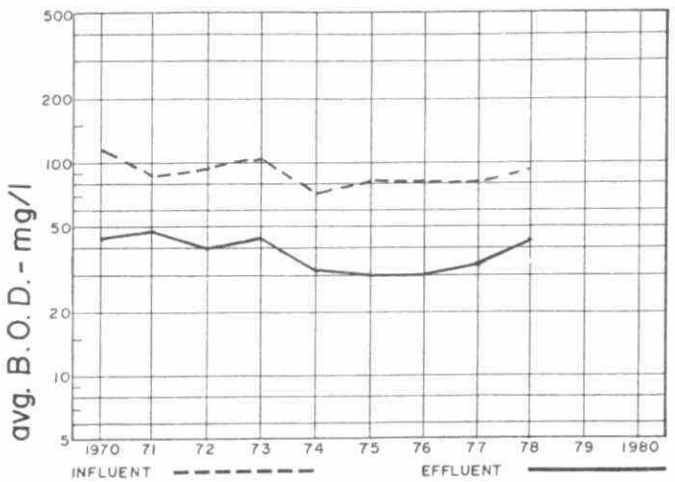
WEST SIDE PUMPING STATION

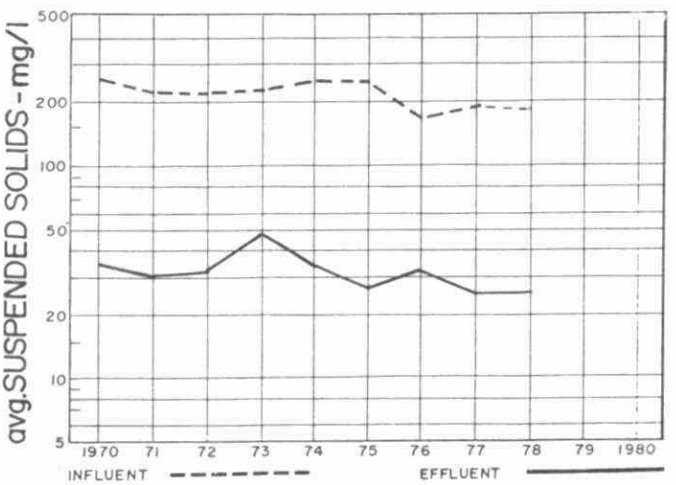
One - 3916 gpm Chicago Pump
Two - 1000 gpm Smart-Turner
Standby - Diesel generator











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000551 — OWEN SOUND WPCP EXPAND TO 5.4 MG IN 79

MUNICIPALITY : 025
REGION : 01 SOUTHWESTERN

CURRENT POPULATION : 19,697

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 3.000 MIGD — DESIGN BOD5 : 180.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	131.750	4.250			64.0	24.0	62	52.7	212.0	31.0	85	238.4	4.0	1.0	75	3.9
FEB	90.677	3.238	3.400		100.0	50.0	50	45.3	193.0	29.0	84	148.7	4.6	1.5	67	2.8
MAR	186.000	6.000	3.700		78.0	33.0	57	83.7	144.0	20.0	86	230.6	4.3	1.0	76	6.1
APR	150.000	5.000			109.0	53.5	50	83.2	105.0	26.4	74	117.9	3.1	1.4	54	2.5
MAY	142.600	4.560	5.600		104.0	38.3	63	93.6	161.0	27.5	82	190.3	4.3	.9	79	4.8
JUN	141.000	4.660	6.630		72.0	29.7	58	59.6	149.0	18.6	87	183.8	4.7	.7	85	5.6
JUL	155.000	5.030	6.300		150.0	80.0	46	108.5	151.0	23.5	84	197.6	5.4	2.4	55	4.6
AUG	135.000	4.380	5.500		93.0	39.0	58	72.9	117.0	22.3	80	127.8	3.0	1.2	60	2.4
SEP	144.600	4.800	6.800		90.0	46.0	48	63.6	179.0	19.0	89	231.3	4.4	1.3	70	4.4
OCT	138.300	4.500	5.900		92.0	23.0	75	95.4	170.0	13.7	91	216.1	4.5	1.6	64	4.0
NOV	138.700	4.600	7.400		122.0	32.0	73	124.8	157.0	32.0	79	173.3	4.8	1.6	66	4.4
DEC	140.700	4.600	8.000		73.0	64.0	12	12.6	172.0	46.8	72	176.1	2.6	1.4	46	1.7
TOTAL	1694.327							895.9				2231.9				47.2
AVERAGE		4.635	MAXIMUM 8.000		95.5	42.7	55		159.1	25.8	83		4.1	1.3	68	
NO. OF SAMPLES					22	44			211	168			22	23		

POINT EDWARD

PROJECT	Village of Point Edward WPCP
PROJECT NO.	2-0036-59
TREATMENT	Primary
DESIGN FLOW	0.57 mgd
DESIGN POPULATION	5,700
BOD - Raw Sewage	170 mg/l
- Removal	47%
SS - Raw Sewage	200 mg/l
- Removal	60%

RAW SEWAGE PUMPS

Type: Fairbanks-Morse
Size: Two 1300 lgpm @ 35' tdh

PRIMARY TREATMENT

Screening

Type: Bar screens, manually cleaned
Size: Two; 1¼" spacing

Grit Removal

Type: Channels
Size: Two 16 X 1.75 X 2'
Retention: 0.88 min

Primary Sedimentation

Type: Dorr
Size: One 35' dia x 10' swd (60,000 Imp. gal)
Retention: 2.53 hr
Loading: Surface, 594 Imp. gal/ft²/day
Weir, 5,190 Imp. gal/ft/day

CHLORINATION

Type: BIF
Size: One 200 lb/day

Chlorine Contact Chamber

Size: One 20 X 10 X 8½' (10,600 gal)
Retention: 27 min

OUTFALL

- to St. Clair River

SLUDGE HANDLING

Digestion System - Single-stage

Type: Dorr; 2 draft tube mixers
Size: One 35' dia x 20' swd (19,200 cu ft or 119,808 gal)
Loading: 1.07 lb/cu ft/mo

PUMPING STATIONS

Storm Water

Type: Custom Built
Size: One 4700 gpm @ 20' tdh
Two 10000 gpm @ 20' tdh
with two 100 hp diesel standbys

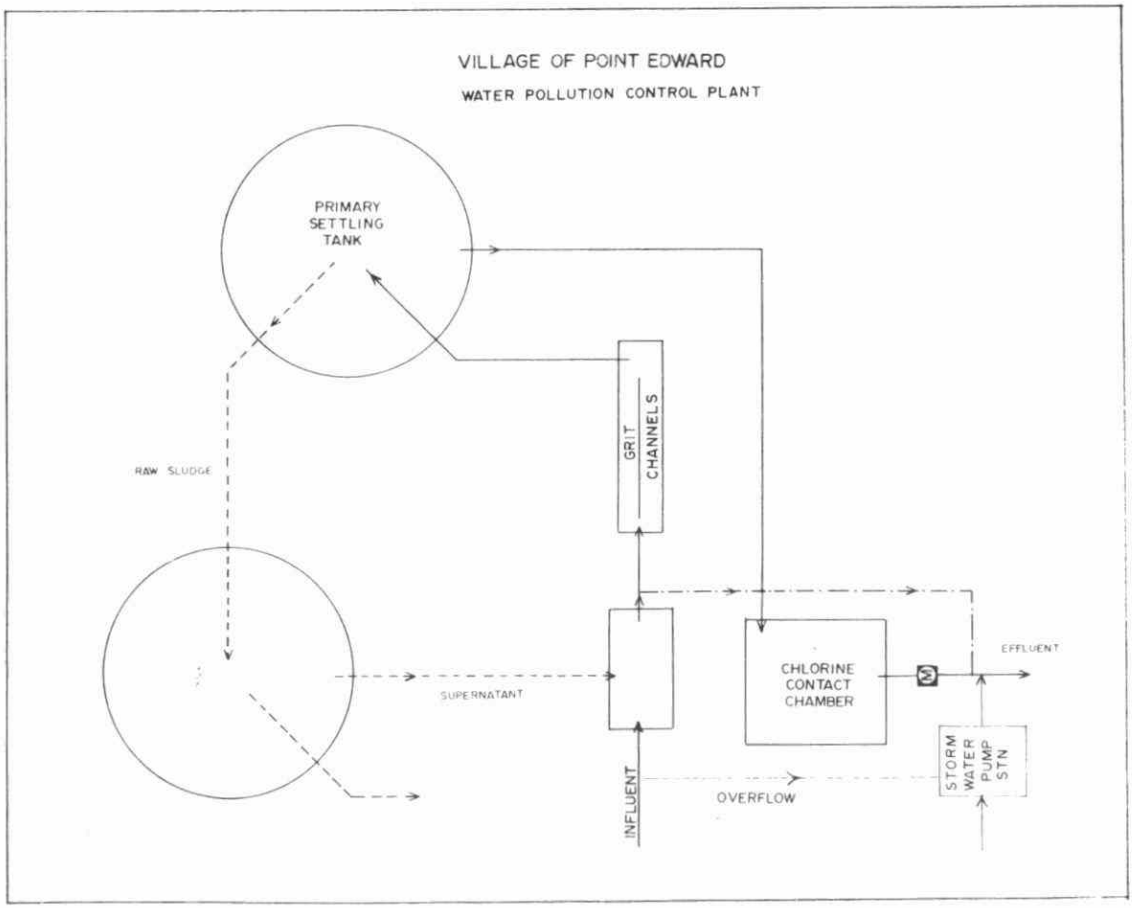
Helena Street

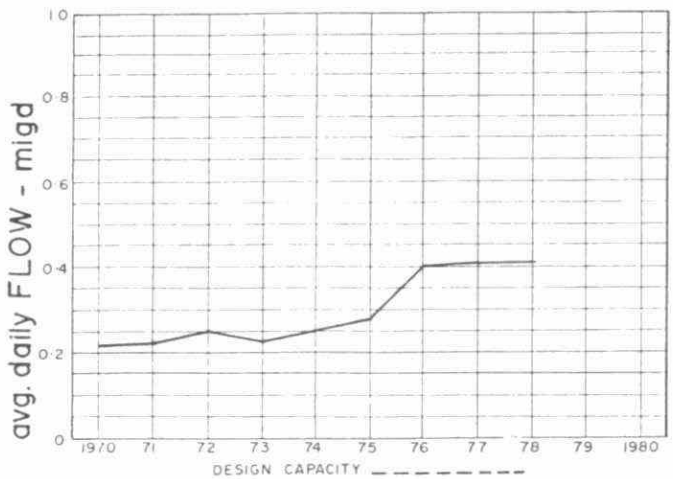
Type: Smith & Loveless package lift station
Size: Two 750 gpm @ 40' tdh

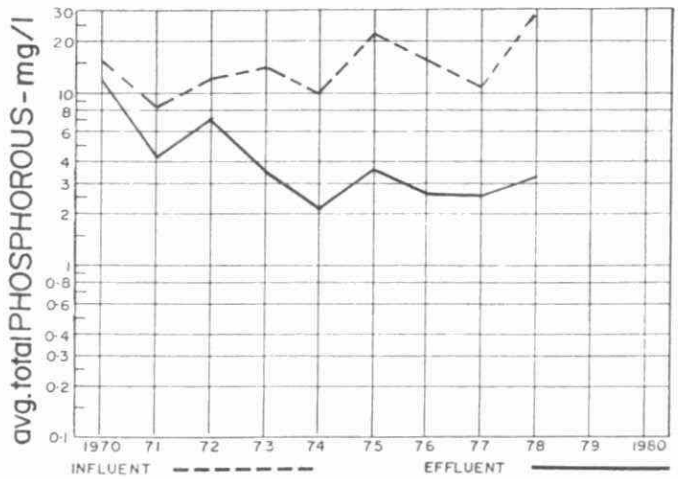
Michigan Avenue

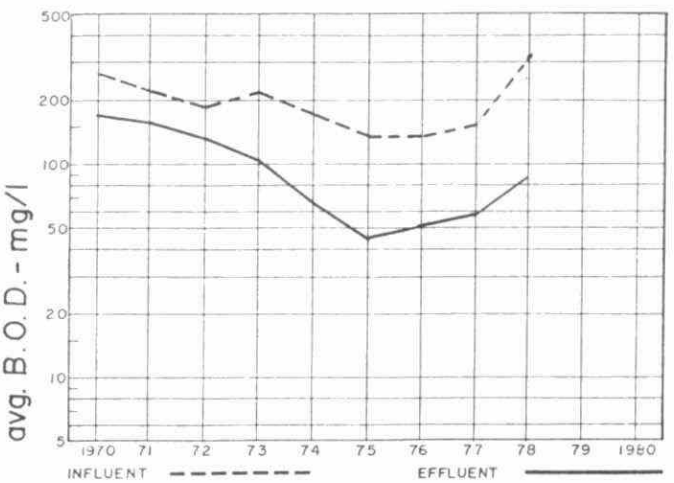
Type: Smith & Loveless package lift station
Size: Two 500 gpm @ 20' tdh

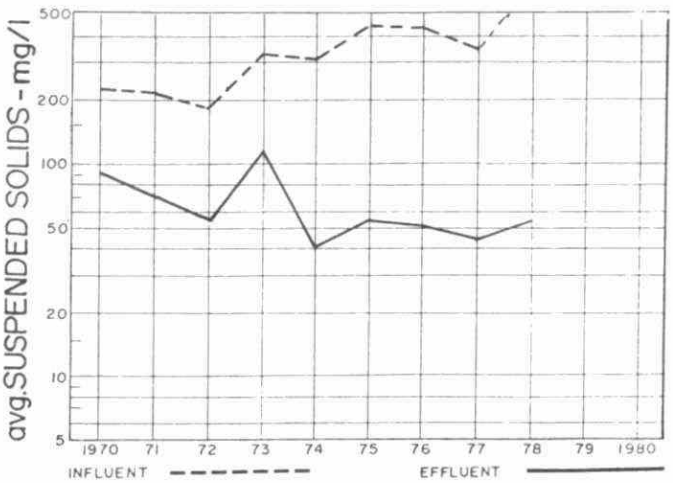
402 STATION (2-0193-63)
Type: Smith and Loveless Package Lift Station
Size: Two 175 gpm @ 23'tdh











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000597 — POINT EDWARD WPCP

MUNICIPALITY : POINT EDWARD
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,417

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.570 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	12.290	.390	.520	-	*	*			*	*			*	*		
FEB	10.790	.390	.440	-	255.0	104.0	59	16.2	783.0	64.0	91	77.5	45.0	4.5	90	4.3
MAR	14.650	.470	.610	-	*	*			*	*			*	*		
APR	12.960	.430	.560	.680	175.0	47.0	73	16.5	529.0	38.0	92	63.6	21.2	2.6	87	2.4
MAY	13.270	.420	.500	1.000	140.0	60.0	57	10.6	240.0	45.0	81	25.8	8.1	1.4	82	.8
JUN	13.300	.440	.530	1.000	205.0	44.0	78	21.4	742.0	34.0	95	94.1	24.4	1.6	93	3.0
JUL	13.590	.430	.520	.700	205.0	44.0	78	21.8	742.0	34.0	95	96.2	24.4	1.6	93	3.0
AUG	13.630	.440	.550	1.000	220.0	150.0	31	9.5	170.0	35.0	79	18.4	7.2	6.2	13	.1
SEP	12.930	.430	.500	1.000	*	*			*	*			*	*		
OCT	11.920	.380	.490	.770	195.0	104.0	46	10.8	546.0	83.6	84	55.1	27.0	3.0	88	2.8
NOV	11.280	.380	.440	.550	1000.0	70.0	93	104.9	1440.0	60.0	95	155.6	62.0	3.6	94	6.5
DEC	11.590	.370	.500	.580	345.0	112.0	67	27.0	990.0	83.0	91	105.1	49.0	5.2	89	5.0
TOTAL	152.200							238.7				691.4				27.9
AVERAGE		.414	MAXIMUM .610	MAXIMUM 1.000	304.4	81.6	73		686.8	52.8	92		29.8	3.3	88	
NO. OF SAMPLES					10	9			10	9			10	9		

Ministry of the Environment
Ontario

West Central Region

(2)

REGIONAL OFFICE

STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES

Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

NANTICOKE (PORT DOVER)

PROJECT	City of Nanticoke Port Dover WPCP
PROJECT NO.	2-0115-62
TREATMENT	Primary
DESIGN FLOW	0.900 MIGD
DESIGN POPULATION	5,300
BOD - Raw Sewage	210 mg/l
- Removal	30%
SS - Raw Sewage	296 mg/l
- Removal	60%

RAW SEWAGE PUMPS

Type: Worthington
Size: One 800 gpm @ 24' tdh
One 500 gpm @ 24' tdh
Two 1750 gpm @ 25' tdh

PRIMARY TREATMENT

Grit Removal

Type: Aerated, mechanical grit collector (Rex Chainbelt)
Size: One 20' x 10' x 11.85' (14,750 gal)
Retention: 10 min

Air Supply

Type: Roots-Connersville
Size: One 55 cfm
One 65 cfm

Primary Sedimentation

Type: Rex Chainbelt
Size: Three 75' x 15' x 8' (168,000 gal)
Retention: 1.93 hr
Loading: Surface, 620 gal/ft^2/day
Weir, 46,500 gal/ft/day

CHLORINATION

F & P automatic

Chlorine Contact Chamber

Size: One 21½' x 18' x 6½' (15,950 gal)
Retention: 11 min

OUTFALL

to Lake Erie

SLUDGE HANDLING

Aerated holding tank, one
20' x 15' x 8.2' (avg)
Size: 2,460 ft^3 or 12,750 gal

Vacuum Filter

Type: Eimco (cloth)
Size: One 200 sq ft

PUMPS -- TYPE and SIZE

#1 Pumping Station (custom-built)

Type: Worthington
Size: Three 1750 gpm @ 66' tdh (station has one Barminutor, Model C)

#2 Pumping Station (prefabricated)

Type: Fairbanks-Morse
Size: Two 417 gpm @ 48' tdh

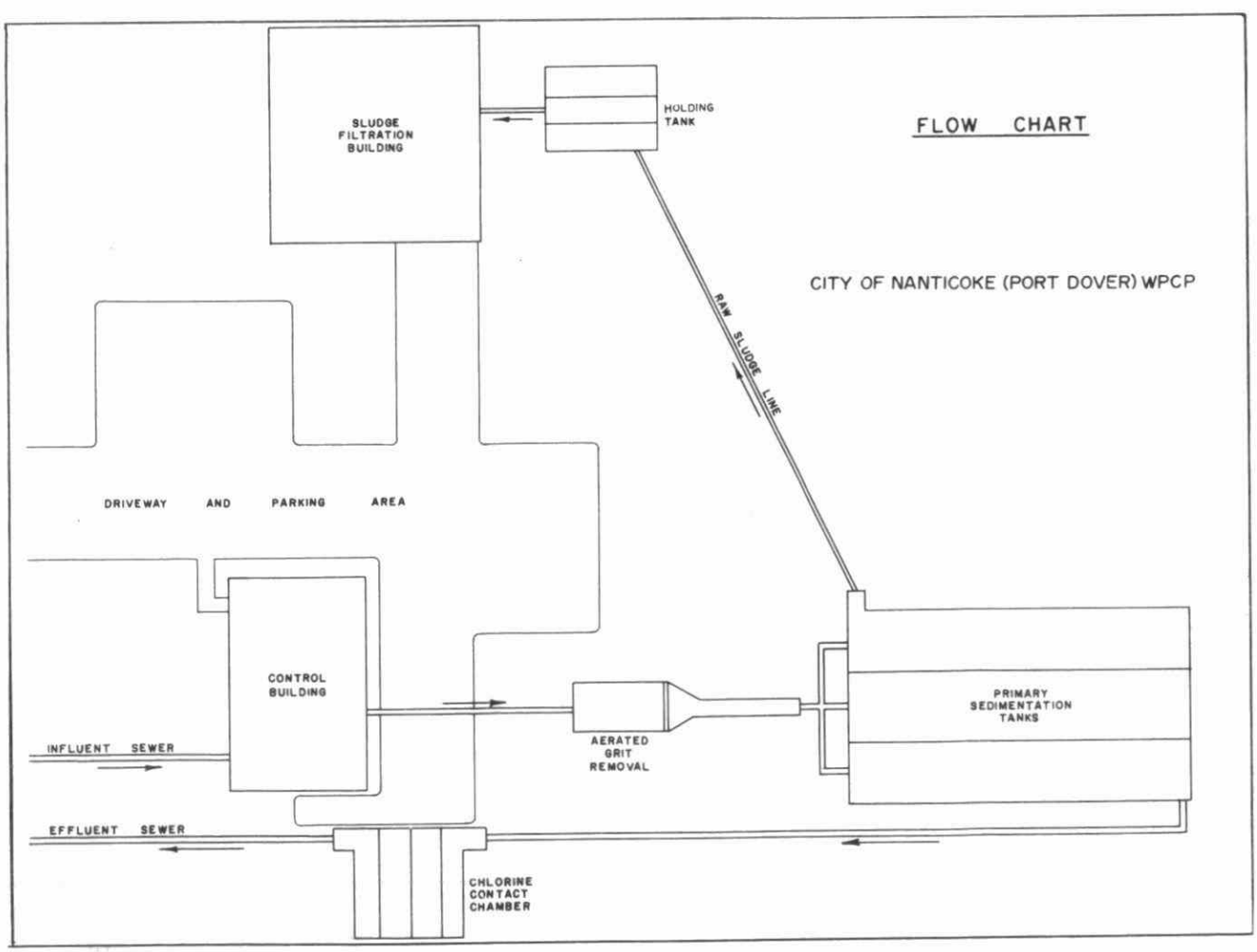
#3 Pumping Station (prefabricated)

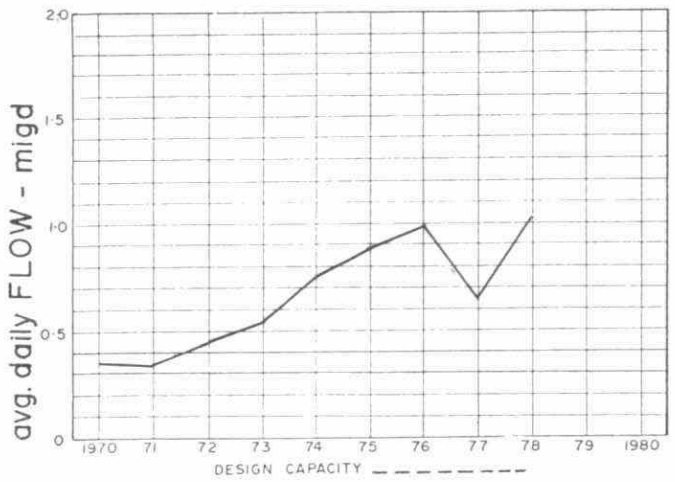
Type: Fairbanks-Morse
Size: Two 207 gpm @ 65' tdh

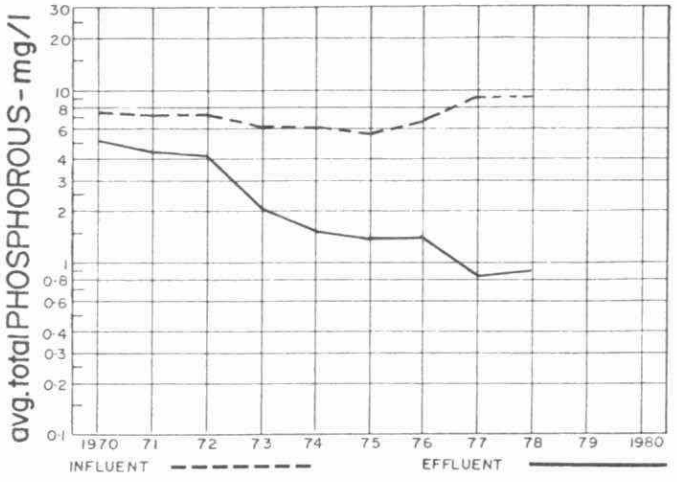
#4 Pumping Station

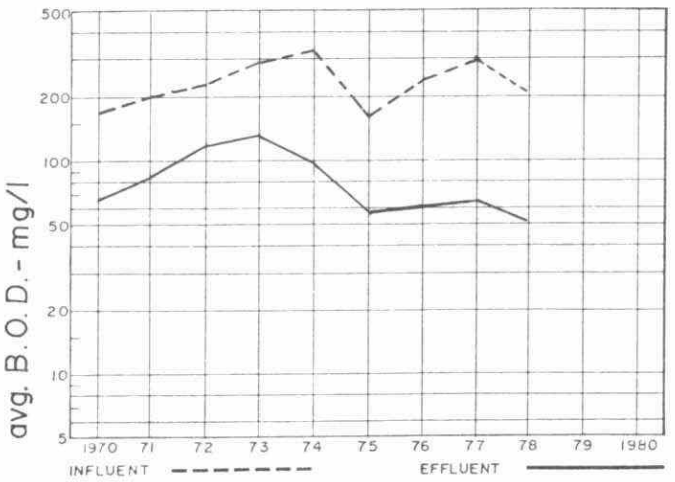
Type: Flygt submersible
Size: Two 217 gpm @ 19' tdh

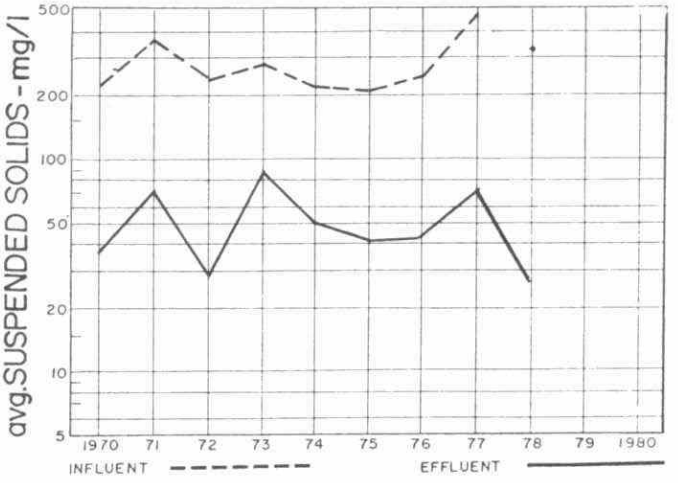
NOTE: Above pumping stations have overflows to Lynn River











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000604 — NANTICOKE (PORT DOVER)

MUNICIPALITY : NANTICOKE (PORT DOVER)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 18,829

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.900 MIGD — DESIGN BOD5 : 210.0 MG/L — DESIGN SUSP.SOLIDS : 296.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	17.840	.620	.760		205.0	34.0	83	30.5	278.0	10.0	96	47.8	*	.4		
FEB	15.440	.580	.700	.900	190.0	33.3	82	24.1	433.0	34.0	92	61.6	12.5	.4	96	1.8
MAR	13.320	*			52.0	20.0	61	4.2	183.0	9.0	95	23.1	*	.2		
APR	53.700	1.790	2.000	2.500	139.0	43.5	68	51.2	226.0	33.0	85	103.6	8.3	3.3	60	2.6
MAY	43.450	1.401	1.910		176.0	72.0	59	45.1	248.0	43.0	82	89.0	7.2	1.6	77	2.4
JUN	29.600	.990	1.300		125.0	75.0	40	14.8	282.0	32.0	88	74.0	8.5	.6	92	2.3
JUL	25.857	.834	1.164		185.0	72.0	61	29.2	233.0	48.0	79	47.8	7.6	.5	93	1.8
AUG	27.550	.889	1.366	4.000	350.0	87.0	75	72.4	334.0	44.0	86	79.8	9.7	.7	92	2.4
SEP	26.806	.894	1.366	3.000	373.0	79.0	78	78.8	509.0	31.0	93	128.1	11.3	.6	94	2.8
OCT	32.804	1.058	2.033	4.000	243.0	64.0	73	58.7	247.0	24.0	90	73.1	7.8	.7	91	2.3
NOV	29.003	.967	1.505	2.600	199.0	37.5	81	46.8	269.0	26.0	90	70.4	8.1	1.4	82	1.9
DEC	31.230	1.036	1.309	1.600	307.0	13.5	95	91.6	650.0	8.5	98	200.3	15.8	.4	97	4.8
TOTAL	346.600							547.4				998.6				25.1
AVERAGE		1.005	MAXIMUM 2.033	MAXIMUM 4.000	212.0	52.5	75		324.3	28.5	91		9.6	.9	90	
NO. OF SAMPLES					23	23			23	23			20	22		

Ministry of the Environment
Ontario

Central Region

③

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

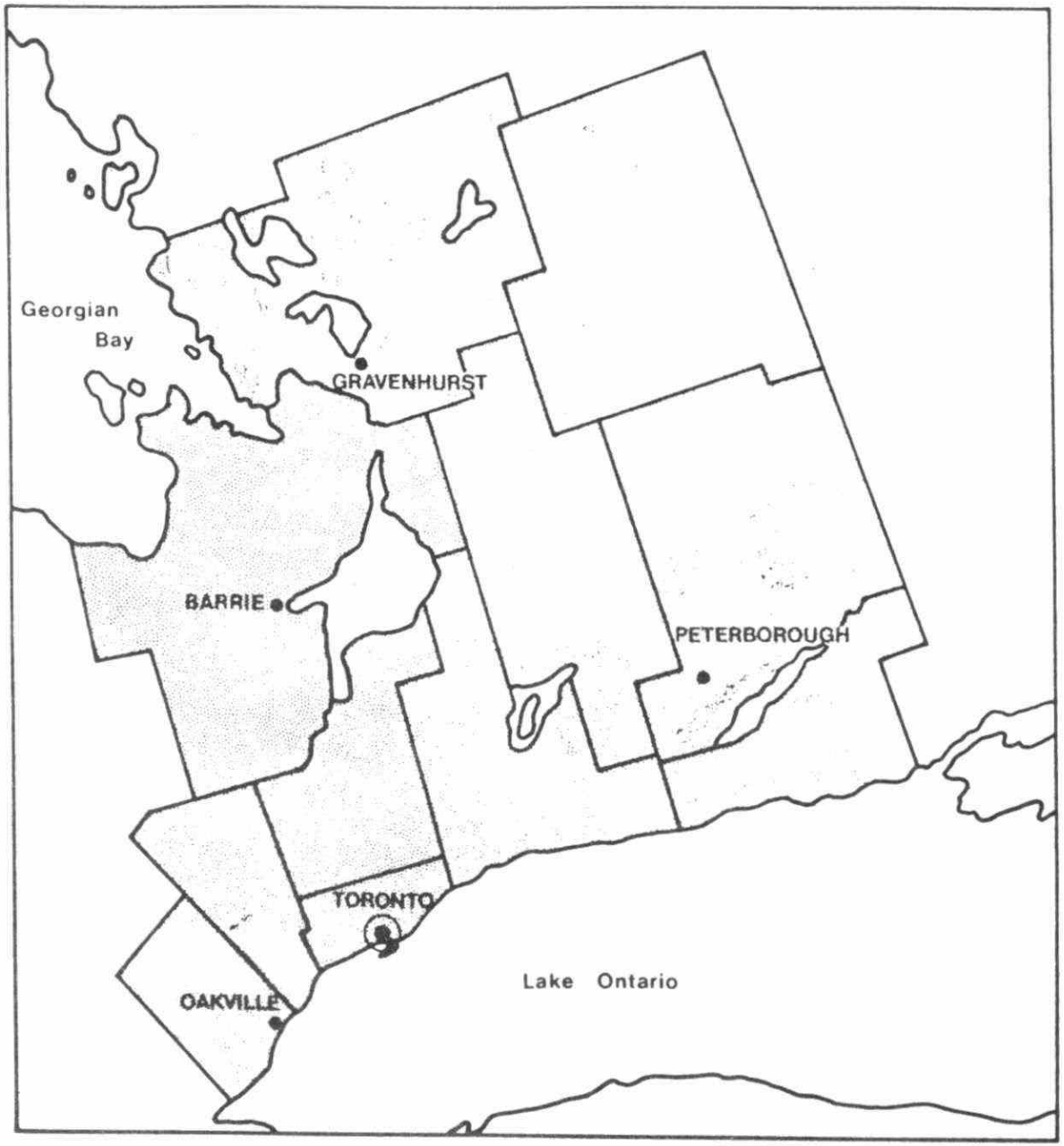
Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386


Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

PROJECT	Town of Midland WPCP
PROJECT NO.	2-0146-63
TREATMENT	Primary
DESIGN FLOW	1.25 mgd
DESIGN POPULATION	12,500
BOD - Raw Sewage	225 mg/l
- Removal	40%
SS - Raw Sewage	300 mg/l
- Removal	60%

PRIMARY TREATMENT

Comminution

Type: Barminutor
Size: One Model C

Grit Removal

Type: Dorr Detritor
Size: One 12' x 12' x 16" (1,200 gal)
Retention: 1.38 min

Primary Sedimentation

Type: Dorr
Size: Two 50' dia x 8' swd 195,000 gal)
Retention: 3.75 hours
Loading: Surface, 319 gal/ft^2/day
Weir, 3970 gal/ft/day

CHLORINATION

Type: W & T, Type A711 (Auto)
Size: One 1000 lb/day

Chlorine Contact Chamber

Size: Irregular (16,200 gal)
Retention: 18.7 min

OUTFALL

615' of 24" pipe to Georgian Bay

SLUDGE HANDLING

Digestion System - Two Stage

Primary --
Type: Babcock-Wilson Draft tube mixers (2)
Size: One 30' dia x 22' (15,600 cu ft or 97,200 gal)
Loading: 4.3 lb/cu ft/mo

Secondary --
Type: Fixed steel cover
Size: One 30' dia x 21½' (15,200 cu ft or 94,600 gal)
Total Loading: 2.2 lb/cu ft/mo

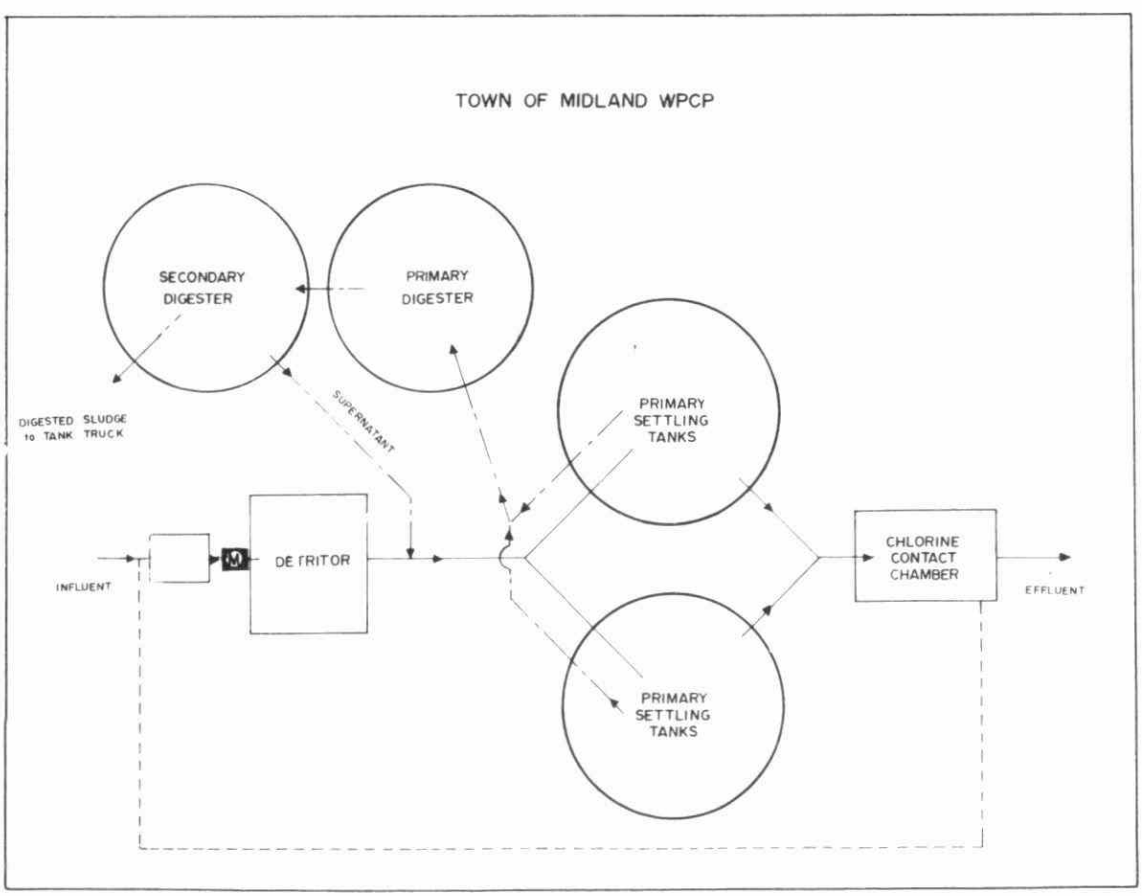
PUMPING STATIONS

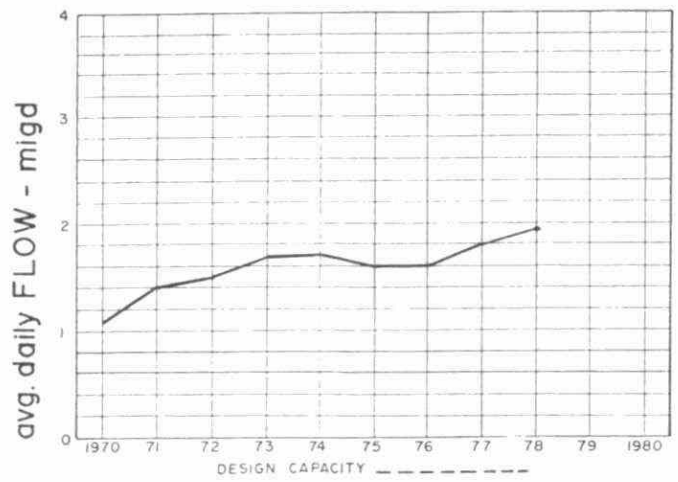
#1 Pumping Station

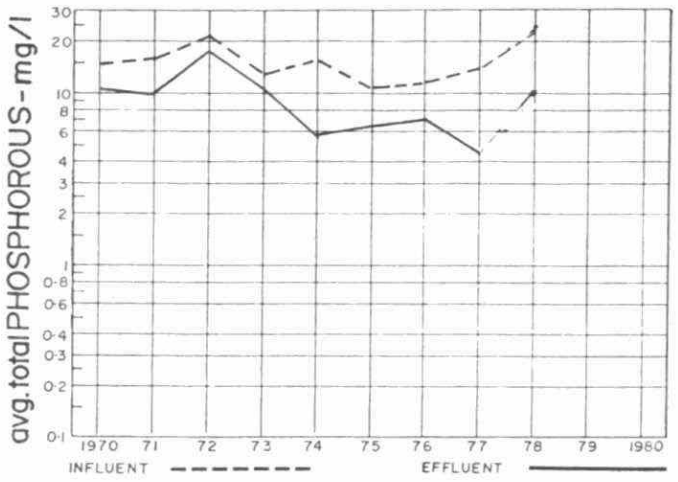
Type: Worthington
Size: Two 780 gpm @ 37' tdh
One 2600 gpm @ 60' tdh

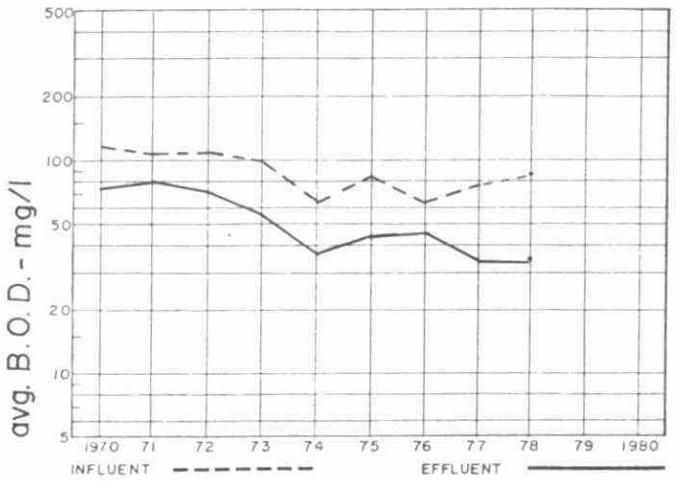
#2 Pumping Station

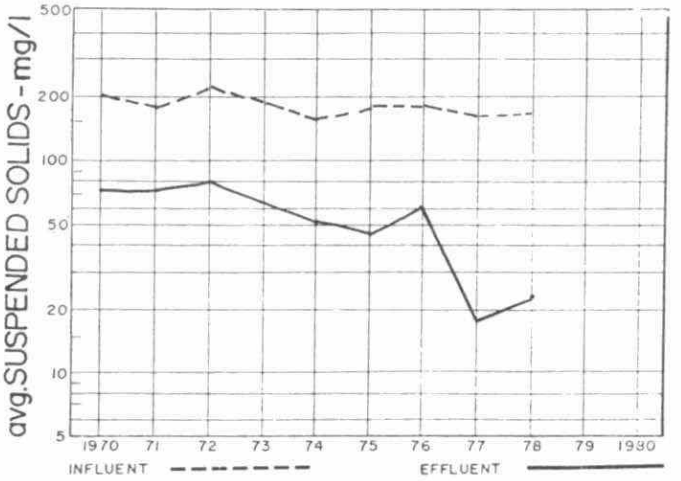
Type: Flygt (submersible)
Size: Two, each 190 gpm @ 30' tdh











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000463 — MIDLAND WPCP

MUNICIPALITY : MIDLAND
REGION : 03 CENTRAL

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 12,500

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.250 MIGD — DESIGN BOD5 : 225.0 MG/L — DESIGN SUSP.SOLIDS : 300.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	53.710	1.730	1.920	3.600	85.0	44.0	48	22.0	120.0	27.0	77	49.9	9.6	3.4	64	3.3
FEB	48.520	1.730	1.910	2.700	120.0	42.0	65	37.8	215.0	15.0	93	97.0	54.0	22.0	59	15.5
MAR	64.605	2.084	2.540	4.900	80.0	36.0	55	28.4	190.0	20.0	89	109.8	26.0	6.8	73	12.4
APR	85.817	2.861	4.210	5.100	80.0	35.0	56	38.6	182.0	25.0	86	134.7	23.0	8.5	63	12.4
MAY	64.061	2.066	2.447	5.000	65.0	26.0	60	24.9	182.0	30.0	83	97.3	19.0	9.5	50	6.0
JUN	58.414	1.947	2.623	4.900	75.0	44.0	41	18.1	185.0	15.0	91	99.3	12.0	7.6	36	2.5
JUL	53.328	1.720	2.318	5.000	45.0	18.0	60	14.3	195.0	25.0	87	90.6	19.0	4.0	78	7.9
AUG	52.849	1.705	2.063	5.100	60.0	28.0	53	16.9	170.0	20.0	88	79.2	30.0	8.3	72	11.4
SEP	53.230	1.774	2.602	5.100	85.0	32.0	62	28.2	205.0	10.0	95	103.7	20.0	10.0	50	5.3
OCT	53.805	1.736	2.649	5.100	70.0	40.0	42	16.1	160.0	8.0	95	81.7	27.0	8.1	70	10.1
NOV	51.809	1.727	2.757	5.500	80.0	35.0	56	23.3	180.0	25.0	86	80.3	38.0	13.0	65	12.9
DEC	49.605	1.600	2.437	4.800	120.0	40.0	66	39.6	195.0	80.0	58	57.0	31.0	19.0	38	5.9
TOTAL	689.753							308.2				1080.5				105.6
AVERAGE		1.890	MAXIMUM 4.210	MAXIMUM 5.500	80.4	35.0	56		181.5	25.0	86		25.7	10.0	61	
NO. OF SAMPLES					12	12			12	12			12	12		

Ministry of the Environment
Ontario

Southeastern Region

④

REGIONAL OFFICE

KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES

Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

PEMBROKE
OTTAWA
CORNWALL
KINGSTON
BELLEVILLE
Lake Ontario

CORNWALL

PROJECT City of Cornwall WPCP

PROJECT NO. 1-0001-66

DESIGN FLOW 8.25 mgd

DESIGN POPULATION 66,000

DESIGN LOADING

BOD - 130 mg/l

SS - 160 mg/l

PRIMARY TREATMENT

Comminution

Type: Barminutor
Size: Two Type "C"

Screening (Bypass channel)

Size: 2" spaces

Grit Removal

Type: Aerated; grit removed by clamshell bucket
Size: Two 38' 6" x 15' 10" x 13' 5" swd (98,500 gal)
Retention: 17 min

Air Supply

Type: Hoffman
Size: Two 1,100 scfm (also for channel aeration)

Primary Sedimentation

Type: Jeffrey
Size: Two 143' x 48' x 12' (1.245 mil gal)
Retention: 3 hours
Loading: Surface, 600 gal/ft^2/day
Weir, 14300 gal/ft/day

CHLORINATION

Chlorinator

Type: W & T
Size: One 2,000 lb/day with evaporator

Chlorine Contact Chamber

Size: One 48' 7" x 26' 11" x 10' 6" (85,800 gal)
Retention: 15 min

OUTFALL

- to St. Lawrence River

SLUDGE HANDLING

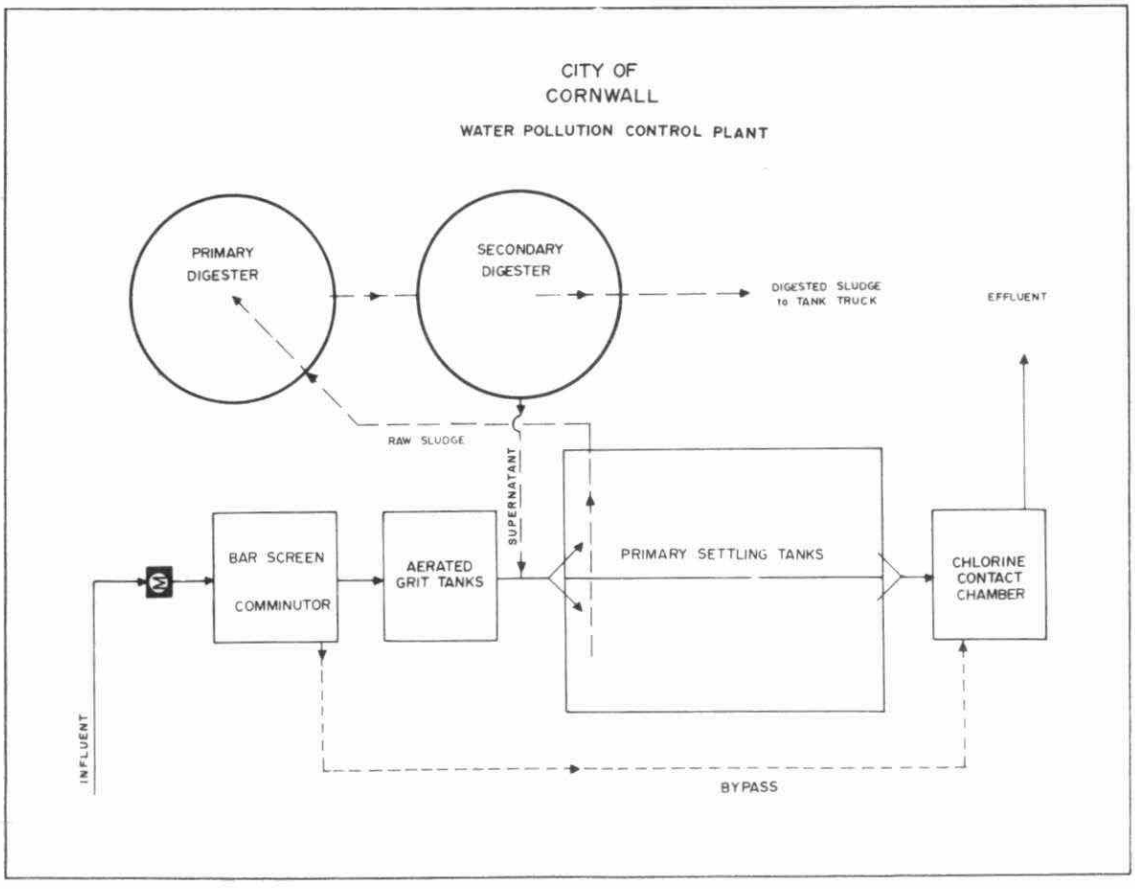
Digestion System - Two-stage

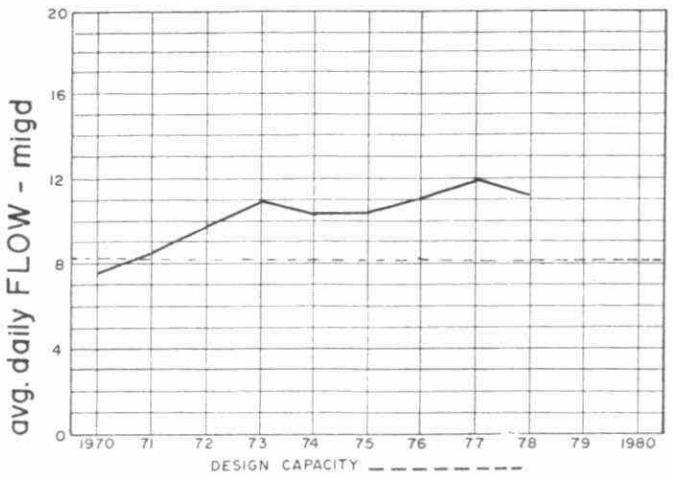
Primary Digester -
Type: Perth (gas mixed) with fixed concrete cover
Size: One 65' dia x 24' swd (82,500 cu ft or 0.515 mil gal)
Loading: 2.88 lb/cu ft/mo

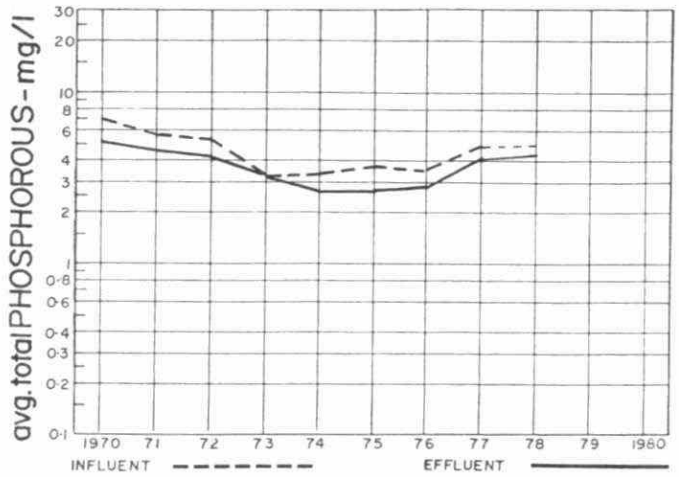
Secondary Digester -
Size: One 65' dia x 24' swd (82,500 cu ft or 0.515 mil gal)
Total Loading: 1.44 lb/cu ft/mo

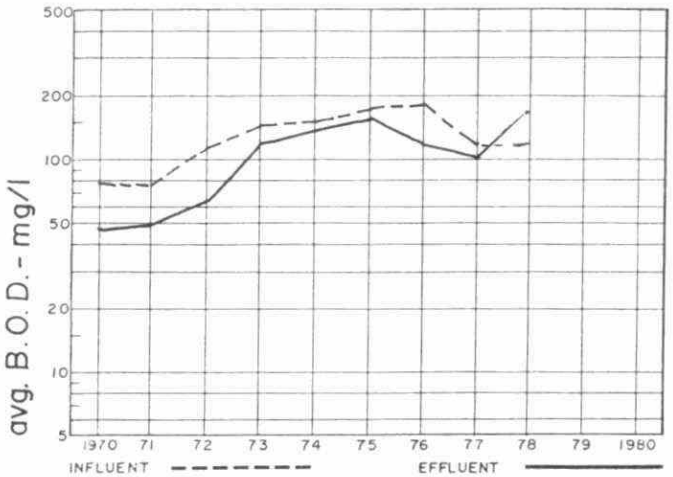
Disposal

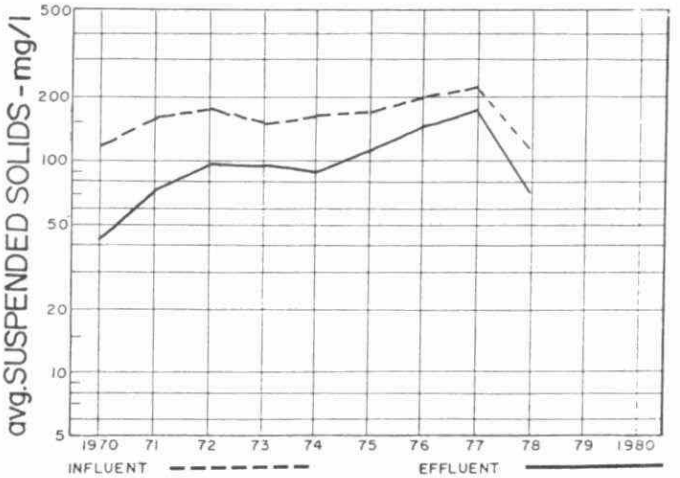
- by tank truck











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000132 — CORNWALL WPCP

MUNICIPALITY : CORNWALL
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 46,152

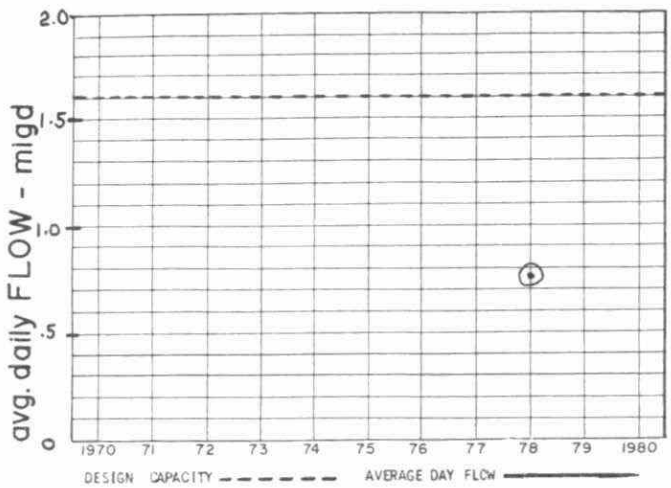
OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

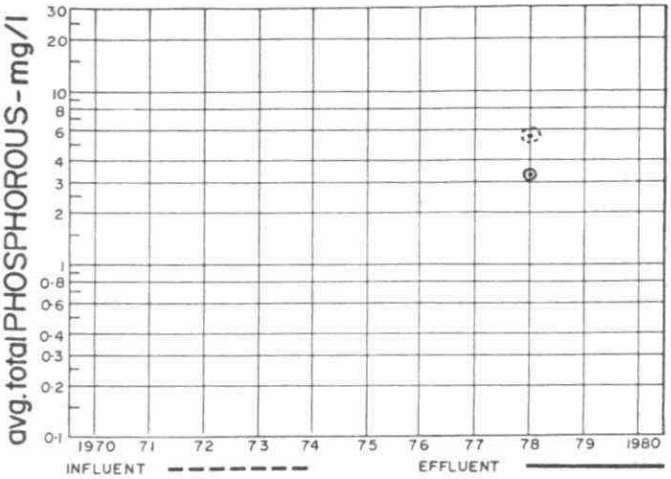
* DATA NOT AVAILABLE

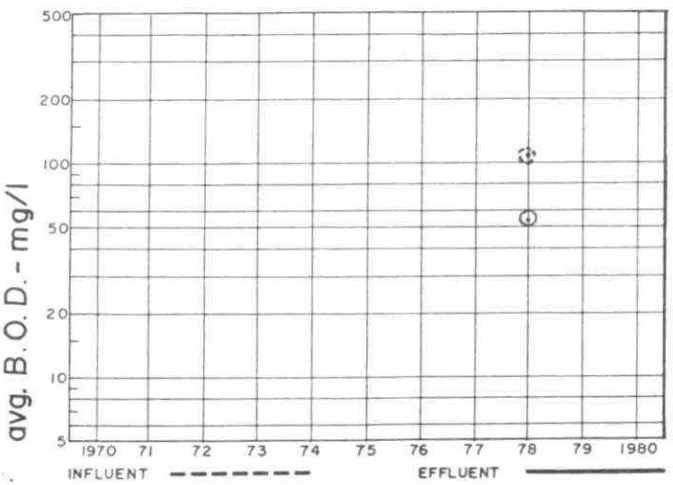
DESIGN CAPACITY : 8.250 MIGD — DESIGN BOD5 : 130.0 MG/L — DESIGN SUSP.SOLIDS : 160.0 MG/L

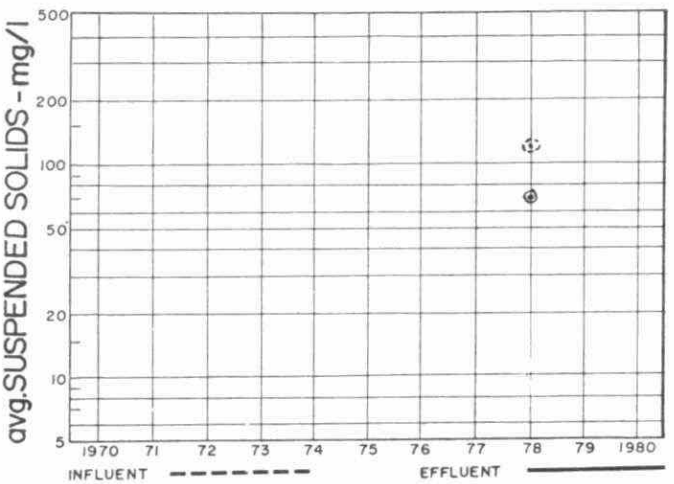
	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUFNT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	447.481	14.434			44.0	55.0	-	-	47.0	62.0	-	-	3.5	*		
FEB	355.710	12.700			137.0	99.0	27	135.1	90.0	63.0	30	96.0	3.9	*		
MAR	548.337	17.700	25.922		120.0	130.0	-	-	180.0	90.0	50	493.5	3.8	7.2	-	-
APR	569.512	18.900			44.0	100.0	-	-	60.0	60.0			1.4	1.6	-	-
MAY	381.110	12.290	16.241		67.0	82.0	-	-	165.0	75.0	54	342.9	5.9	3.5	40	9.1
JUN	278.900	9.290	13.600		130.0	120.0	7	27.8	100.0	90.0	10	27.8	7.2	*		
JUL	251.900	8.120	9.700		72.0	110.0	-	-	100.0	60.0	40	100.7	3.4	3.2	5	.5
AUG	280.200	9.030	11.900		230.0	290.0	-	-	110.0	85.0	22	70.0	5.4	4.4	18	2.8
SEP	235.341	7.844	11.453		193.0	257.0	-	-	250.0	80.0	68	400.0	4.9	*		
OCT	245.200	7.900	14.600		153.0	237.0	-	-	110.0	85.0	22	61.3	4.9	4.9		
NOV	241.500	8.100	21.000		200.0	255.0	-	-	120.0	125.0	-	-	4.8	5.2	-	-
DEC	216.400	7.000	13.100		193.0	280.0	-	-	118.0	72.5	38	98.4	5.0	3.8	24	2.5
TOTAL	4051.591							162.9				1690.6				14.9
AVERAGE		11.109	MAXIMUM 25.922	MAXIMUM	131.9	167.9	-		120.8	78.9	34		4.5	4.2	6	
NO. OF SAMPLES					18	19			22	22			20	13		

PETAWAWA









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120000587 — PETAWAWA W P C P TAKEN OVER APR 78

MUNICIPALITY : PETAWAWA
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 5,565

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 1.600 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR	27.660	.922	1.153	1.700	*	*			*	*			*	*		
MAY	22.537	.727	.815	2.200	*	*			*	*			*	*		
JUN	*	*			*	*			*	*			*	*		
JUL	25.575	.825	.825	1.300	120.0	65.0	45	14.0	80.0	60.0	25	5.1	5.1	3.2	37	.4
AUG	25.903	.835	.912	1.500	77.0	42.0	45	9.0	95.0	72.5	23	5.8	4.1	3.8	7	
SEP	24.733	.824	.925	1.500	92.0	34.0	63	14.3	80.0	37.5	53	10.5	6.5	2.2	66	1.0
OCT	20.802	.671	.800	1.400	102.0	95.0	6	1.4	120.0	65.0	45	11.4	6.2	5.7	8	.1
NOV	21.250	.708	.875	1.350	127.0	42.5	66	17.9	205.0	121.7	40	17.7	5.6	2.6	53	.6
DEC	21.528	.694	1.000	1.300	100.0	46.0	54	11.6	130.0	66.0	49	13.7	6.1	2.7	55	.7
TOTAL	189.988							68.2				64.2				2.8
AVERAGE		.776	MAXIMUM 1.153	MAXIMUM 2.200	103.0	54.0	47		118.3	70.4	40		5.6	3.3	39	
NO. OF SAMPLES					11	11			24	24			22	22		

PRESCOTT

PROJECT Town of Prescott WPCP

PROJECT NO. 1-0023-66

TREATMENT Primary

DESIGN FLOW 1.0 MIGD
DESIGN LOADING
BOD - 80 mg/l

SS - 160 mg/l

PRIMARY TREATMENT

Grit Removal

Type: Manually cleaned
Size: Two 26'2" x 3'9" x 3'4"
Flow Velocity: 1.0 fps

Screening

Type: Manually cleaned
Size: 1" openings

Comminution

Type: Worthington #15-5

Primary Sedimentation

Type: Dorr-Oliver
Size: Two 35' dia x 9' swd. (108,000 I. gals. total)
Retention: 2½ hours
Loading: Surface 1,000 I. gals/ft^2/day
Weir, 10,000 I. gals/ft/day

CHLORINATION

Type: Wallace & Tiernan A-831
Size: Two 50 lbs/day each

Chlorine Contact Chamber

Size: 33,800 gal.
Retention: 30 minutes

OUTFALL

1650' 42" dia. concrete pipe to St. Lawrence River

SLUDGE HANDLING

Digestion System

Type: Single stage
Size: 35' dia x 18 swd (150,000 I.G.)
Loading: 1.6 lb/ft^3/mo.
Recirculation Pump: Smart Turner

PUMPING STATION

a) West Street

Two Smart-Turner, each 870 IGPM @ 36' tdh

b) East Street

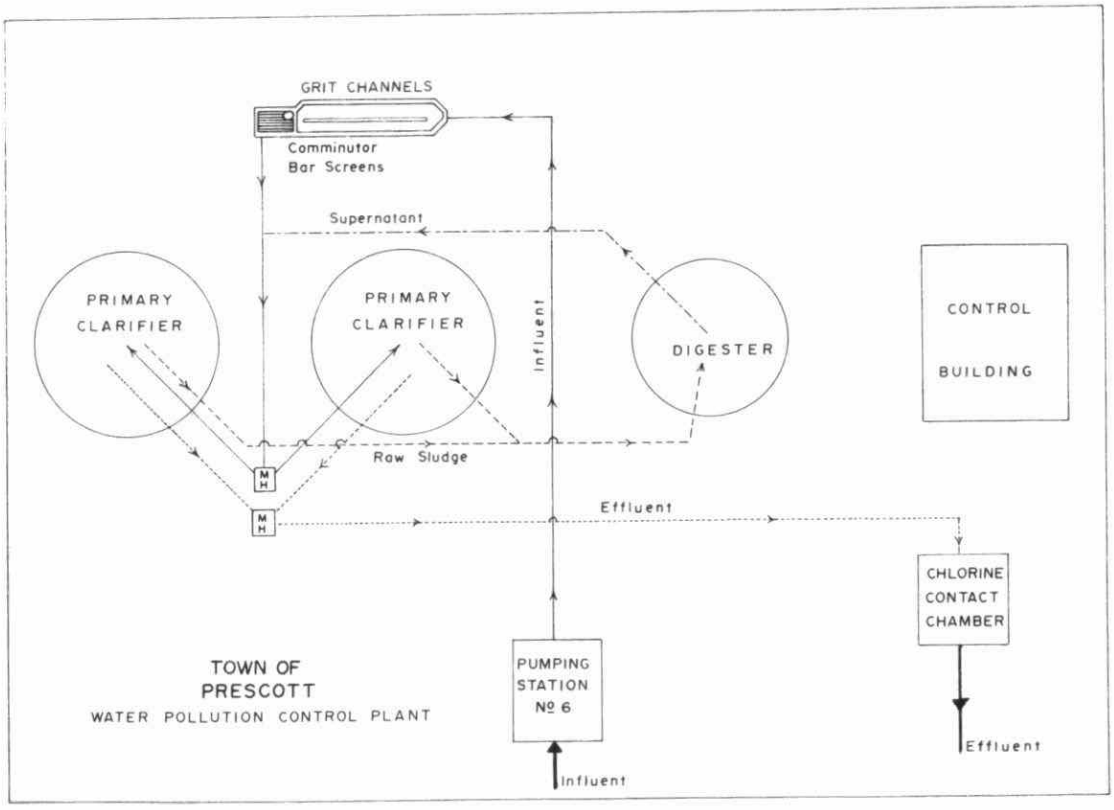
Two Smart-Turner, each 1410 IGPM @ 44' tdh

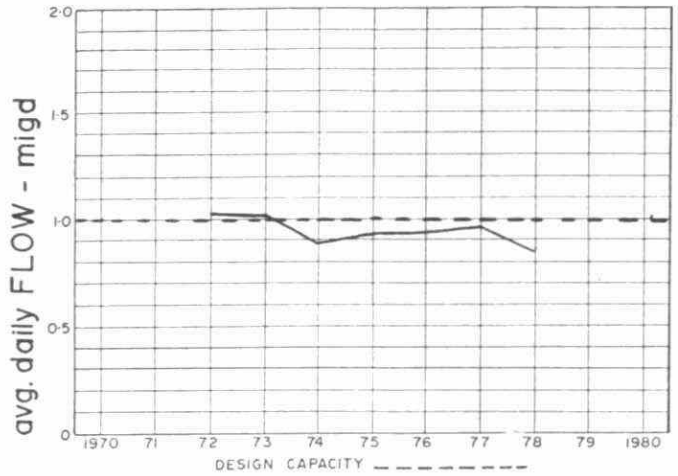
c) Highway 2 & Keefer Street

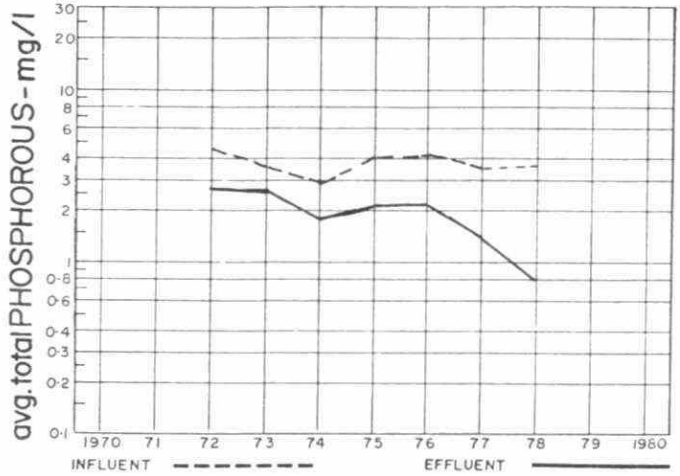
Two Smart-Turner, each 2100 IGPM @ 76' tdh

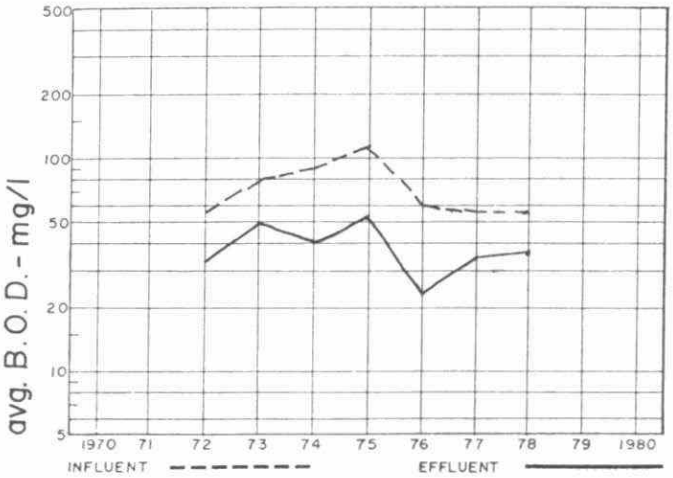
d) Plant Site

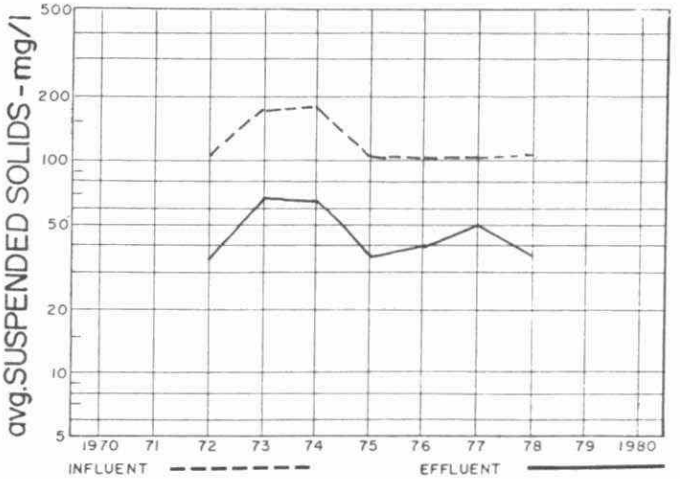
Two Smart-Turner 1400 IGPM @ 33' TDH
One Marathon variable speed











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001122 — PRESCOTT WPCP

MUNICIPALITY : PRESCOTT
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 4,803

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.000 MIGD — DESIGN BOD5 : 80.0 MG/L — DESIGN SUSP.SOLIDS : 160.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	40.621	1.310	3.048		50.0	36.5	27	5.4	91.0	40.0	56	20.7	3.3	1.4	57	.7
FEB	22.571	.806	.985		54.0	31.0	42	5.1	95.0	45.0	52	11.2	3.6	1.2	66	.5
MAR	40.803	1.360	2.479		34.0	21.0	38	5.3	11.0	41.0	-	-	3.4	*		
APR	49.702	1.657	2.227		24.0	23.5	2	.2	94.0	30.0	68	31.8	2.3	.7	69	.7
MAY	23.586	.760	.930		39.0	29.0	25	2.3	95.0	26.0	72	16.2	3.4	.6	82	.6
JUN	18.053	.622	.887		46.0	26.5	42	3.5	57.0	32.5	42	4.4	3.1	.6	80	.4
JUL	20.270	.614	.814		57.0	29.0	49	5.6	62.0	32.0	48	6.0	3.5	.7	80	.5
AUG	20.256	.653	.877		65.0	38.0	41	5.4	40.0	35.0	12	1.0	3.3	.7	78	.5
SEP	17.463	.582	1.097		70.0	33.0	52	6.4	57.0	40.0	29	2.9	2.7	.7	74	.3
OCT	17.945	.598	.644		55.0	70.0	-	-	105.0	47.5	54	10.3	3.4	1.0	70	.4
NOV	19.768	.659	1.054		115.0	39.0	66	15.0	370.0	52.5	85	62.7	7.9	1.0	87	1.3
DEC	21.625	.698	1.202		92.0	56.0	39	7.7	242.0	47.5	80	42.0	6.5	1.1	83	1.1
TOTAL	312.663							61.9				209.2				7.0
AVERAGE		.860	MAXIMUM 3.048	MAXIMUM	58.4	36.0	38		109.9	39.0	64		3.8	.8	77	
NO. OF SAMPLES					26	26			26	26			88	88		

Ministry of the Environment
Ontario

Northeastern Region
(5)

REGIONAL OFFICE

SUDBURY
469 Bouchard St.
705-522-8282

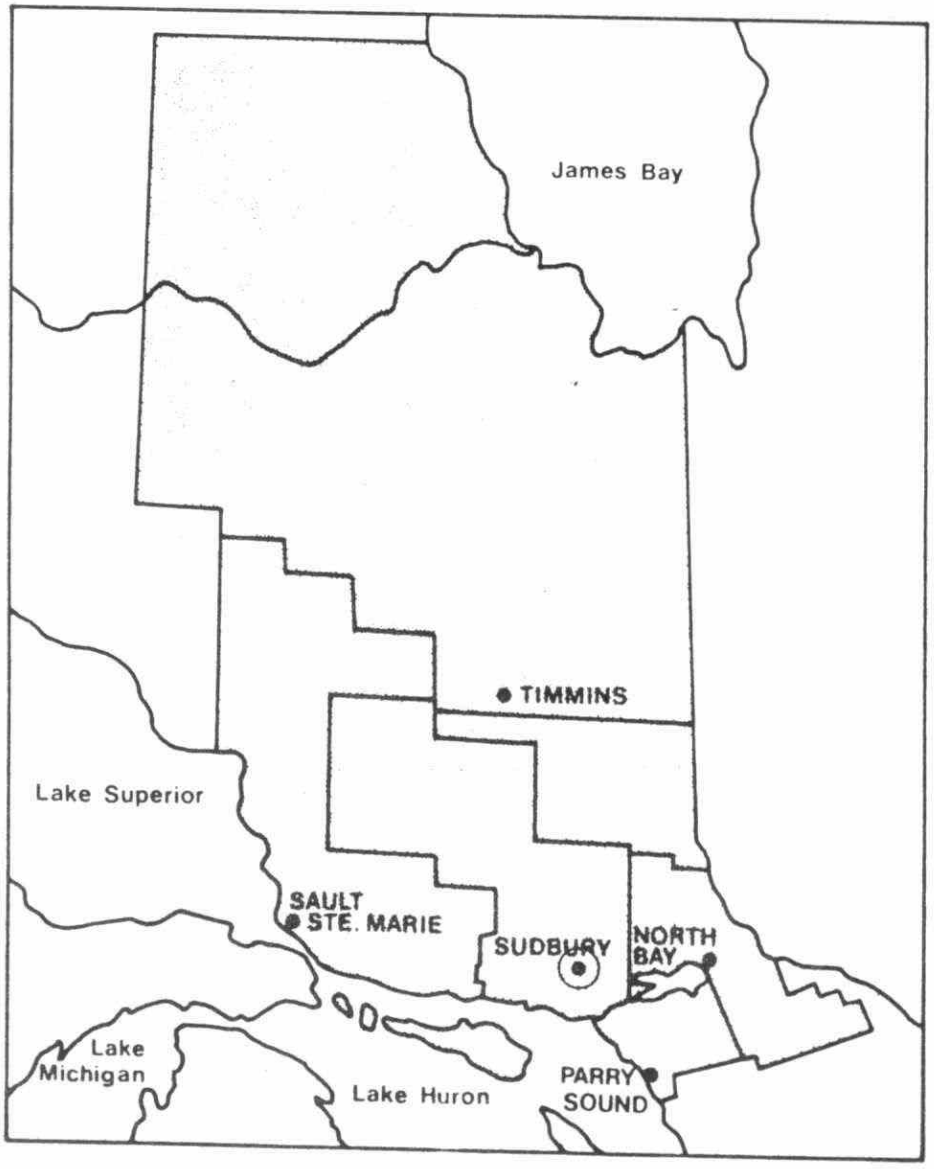
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

ESPANOLA

PROJECT NAME	Town of Espanola WPCP	
PROJECT NO.	2-0074-61	SCREENING
TREATMENT	Primary	2 manually cleaned bar screens
DESIGN FLOW	0.66 migd	GRIT REMOVAL

Two channels - 14'6" x 1.5' x 1.07' (liq. depth)
Flow Velocity - 1.0 fps

PRIMARY SEDIMENTATION

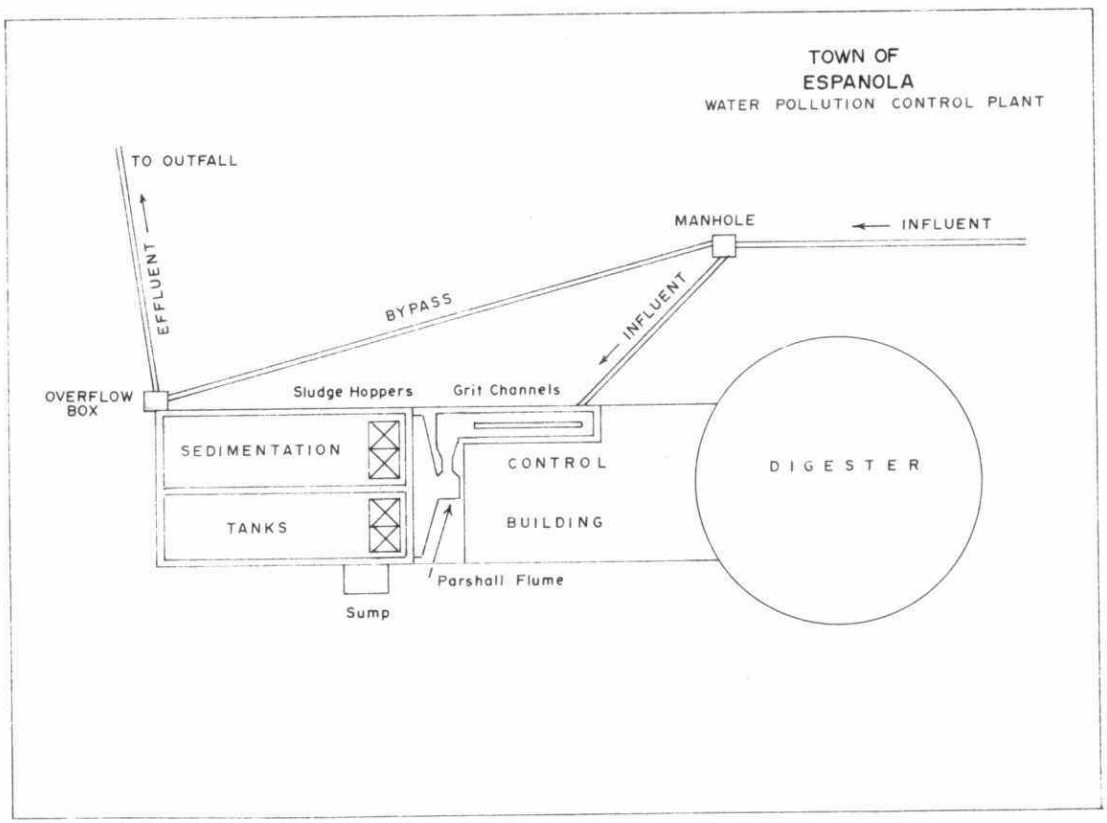
Size: Two 36' x 12' x 10'
Volume: 8640 ft^3 or 54,000 gal.
Detention: 1.95 hours
Loading: Surface 773 gpd/ft^2

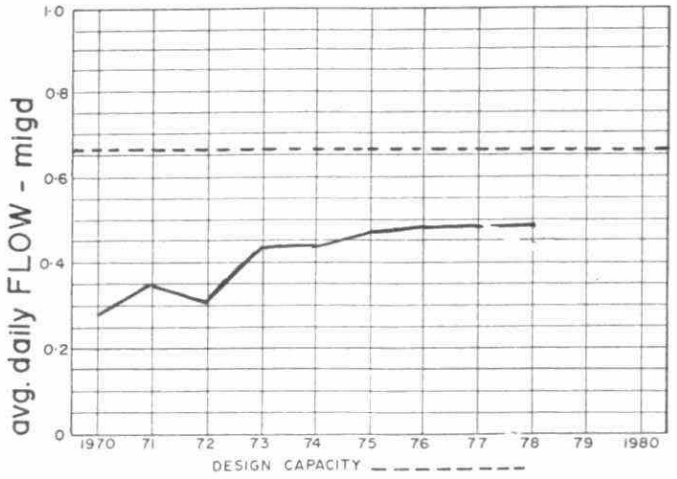
OUTFALL

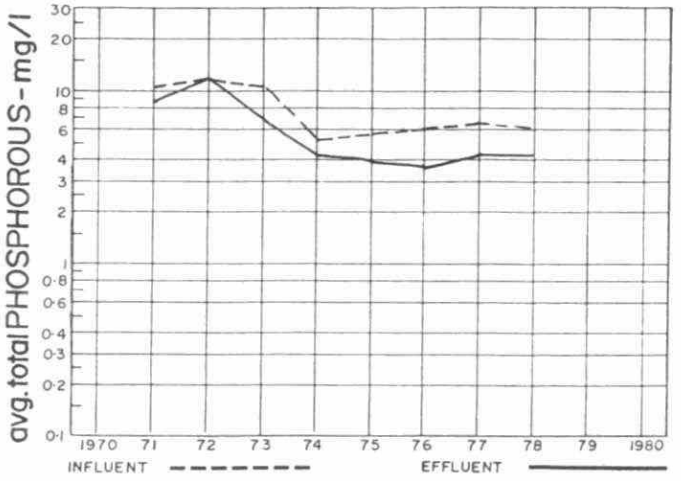
Spanish River

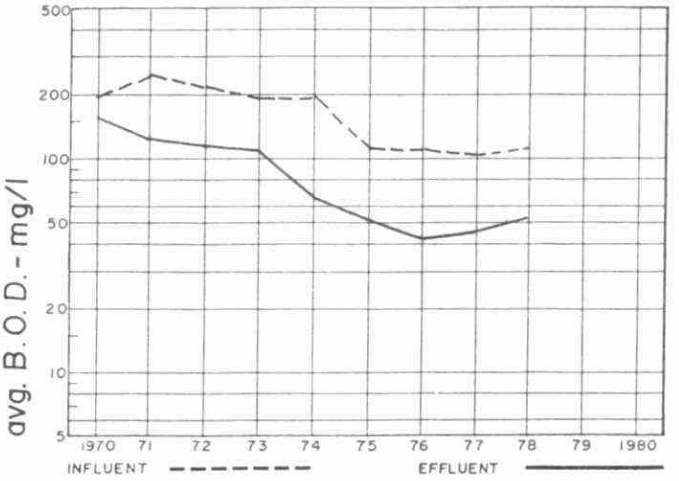
SLUDGE DISPOSAL

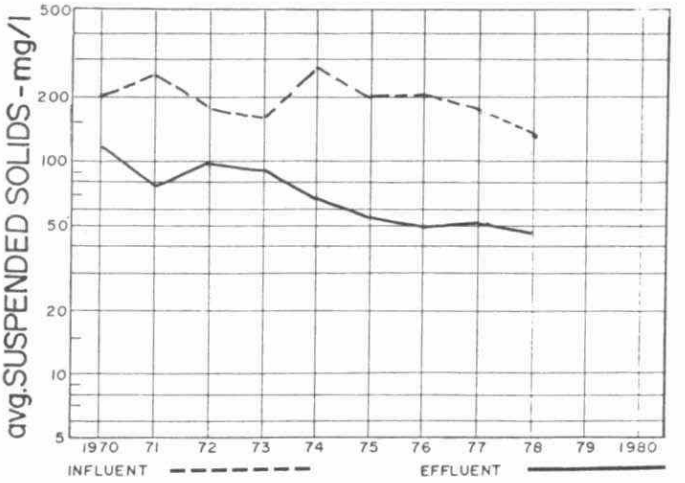
Single stage digestion, fixed roof
Size: One 35' dia. x 19.4' swd
Volume: 18,700 ft^3 or 116,000 gal.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000212 — ESPANOLA WPCP

MUNICIPALITY : ESPANOLA
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : PRIMARY

CURRENT POPULATION : 5,388

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.660 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS 200.0 MG/L

	<--- FLOW DATA				<-><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	14.110	.455	.521		115.0	58.0	49	8.0	120.0	52.0	56	9.5	5.4	4.0	25	.1
FEB	12.554	.448	.488		130.0	60.0	53	8.7	140.0	41.0	70	12.4	6.0	3.2	46	.3
MAR	14.499	.467	.601		105.0	65.0	38	5.8	103.0	56.0	45	6.8	4.8	4.4	8	
APR	14.890	.496	.553		130.0	48.0	63	12.2	127.0	49.0	61	11.6	7.7	4.8	37	.4
MAY	14.580	.470	.648		147.0	65.0	55	11.9	135.0	53.0	60	11.9	7.2	4.8	33	.3
JUN	14.406	.480	.535		107.0	75.0	29	4.6	135.0	77.0	42	8.3	6.2			
JUL	15.263	.492	.624		90.0	32.0	64	8.8	155.0	30.0	80	19.0	6.0	3.5	41	.3
AUG	16.203	.522	.648		90.0	70.0	22	3.2	135.0	65.0	51	11.3	5.2	4.4	15	.1
SEP	15.055	.501	.577		90.0	32.0	64	8.7	150.0	25.0	83	18.8	5.8	3.6	37	.3
OCT	15.174	.489	.676		134.0	21.0	84	17.1	165.0	37.0	77	19.4	5.7	3.5	38	.3
NOV	15.205	.506	.710		153.0	34.1	77	18.0	155.0	49.0	68	16.1	6.6	4.5	31	.3
DEC	15.841	.511	.757		179.0	80.8	54	15.5	131.0	50.2	61	12.8	6.5	4.4	32	.3
TOTAL	177.780							122.5				157.9				2.7
AVERAGE		.486	MAXIMUM .757	MAXIMUM	122.5	53.4	56		137.5	48.6	64		6.0	4.1	32	
NO. OF SAMPLES					33	30			33	30			23	26		

PARRY SOUND

PROJECT Town of Parry Sound WPCP

PROJECT NO. 2-0113-62

TREATMENT Primary

DESIGN FLOW 0.83 mgd

DESIGN POPULATION 7,500

BOD - Raw Sewage 250 mg/l
- Removal 35%

SS - Raw Sewage 200 mg/l
- Removal 35%

PRIMARY TREATMENT

Comminution

Type: Barminutor
Size: One Model C (18")

Grit Removal

Type: Dorr Detritor
Size: One 10 X 10 X 1¼'
Retention: 1.35 min

Primary Sedimentation

Type: Dorr
Size: Two 30' x 30' x 10' swd
(112,000 gallons)
Retention: 3.24 hr
Loading: Surface, 460 gal/ft^2/day
Weir, 3700 gal/ft/day

CHLORINATION

Type: W & T, Type A-731
Size: One 200 lb/day

Chlorine Contact Chamber

Size: One 25½ X 8½ X 8'
(11,150 gal)
Retention: 19.2 min

OUTFALL

- to McCurry Lake

SLUDGE HANDLING

Digestion System - single-stage

Type: Dorr draft tubes (2)
Size: One 35' dia x 20' 9" swd
(20,580 cu ft or 138,000 gal)
Loading: 0.85 lb/cu ft/mo

PUMPING STATIONS

#1: River Street P.S.
Type: Flygt CP-3100
Size: Two 100, usgpm at 25'tdh

#2: Birch Street P.S.
Type: Flygt submersible
Size: Two, 200 gpm

#3: Hawthorne Cres. P.S.
Type: Flygt CP-3100
Size: One, 50 usgpm at 31' tdh

#4: William Street P.S.
Type: Flygt CP-3100
Size: Two, 420 usgpm at 36' tdh

#5: Cascade Street P.S.
Type: Robert Morse (Weinman)
Size: Two, 210 usgpm at 41' tdh

#6: Seguin Street P.S.
Type: Fairbanks Morse
Size: Two, 1040 usgpm at 160' tdh

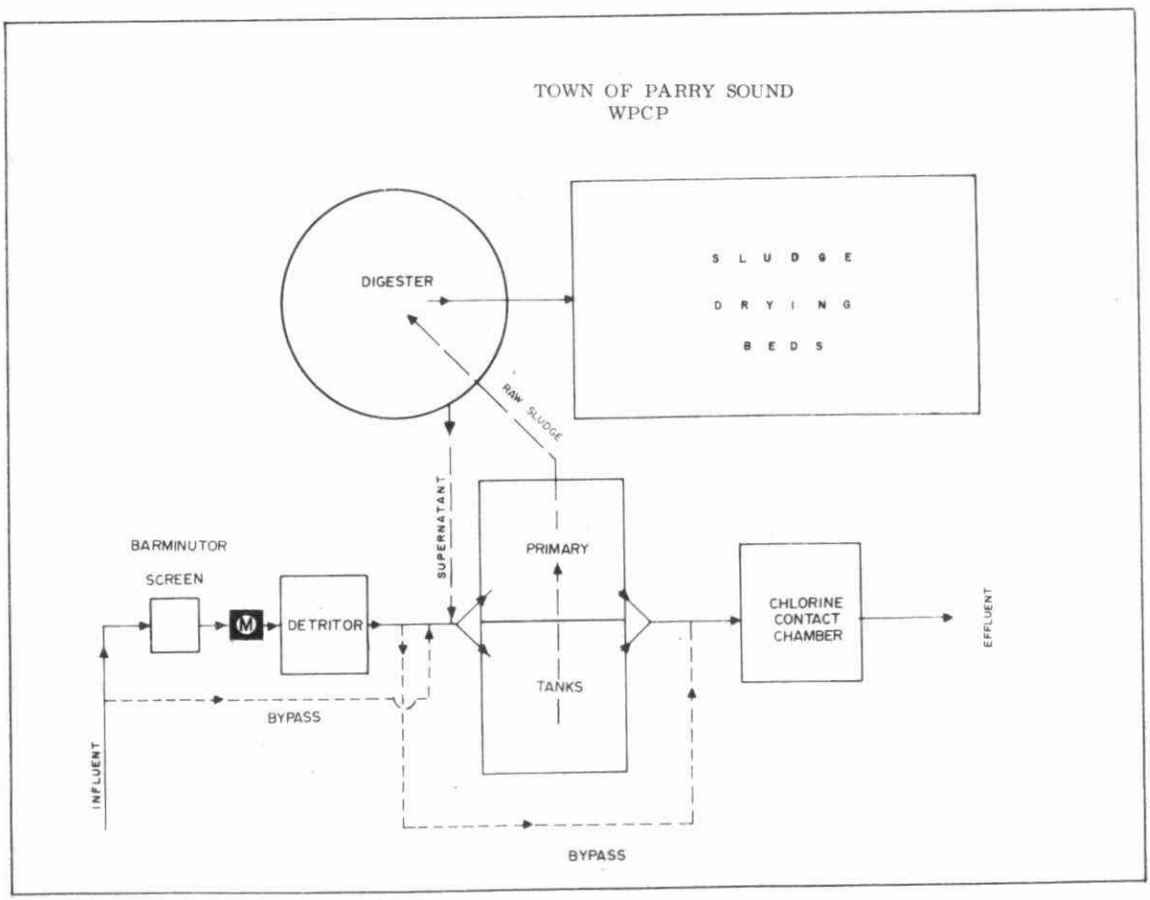
#7: Bay Street P.S.
Type: Flygt CP-3100
Size: One, 340 usgpm at 35' tdh

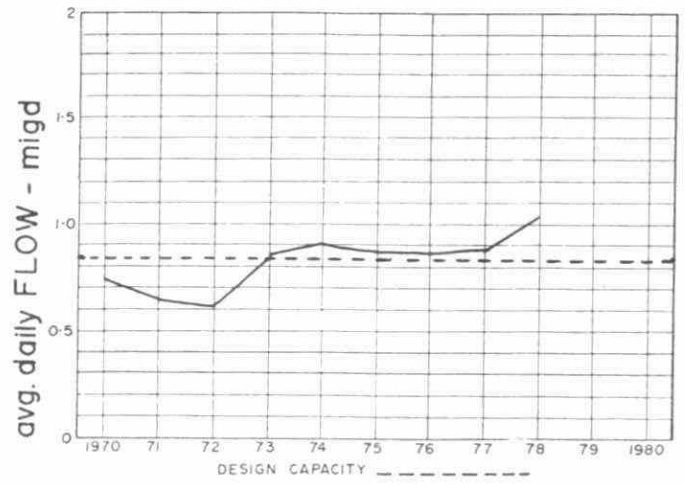
#8: St. Charles Crossing P.S.
Type: Smith & Loveless
Ejector Station
Size: One, 50 usgpm at 25' tdh

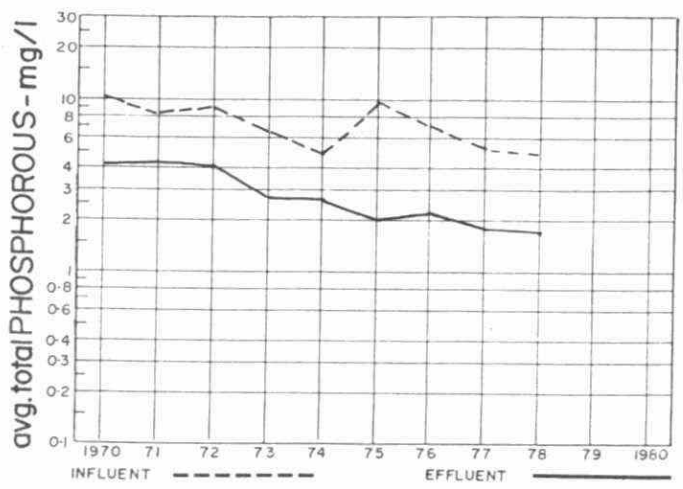
#9: Prospect St. P.S.
Type: Submersible
Size: Two, 275 gpm

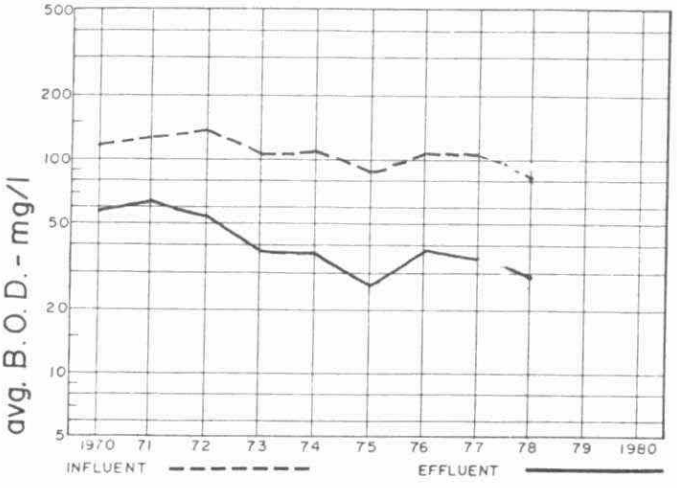
#10: Waubeek St. P.S.
Type: Flygt submersible
Size: Two, 200 gpm

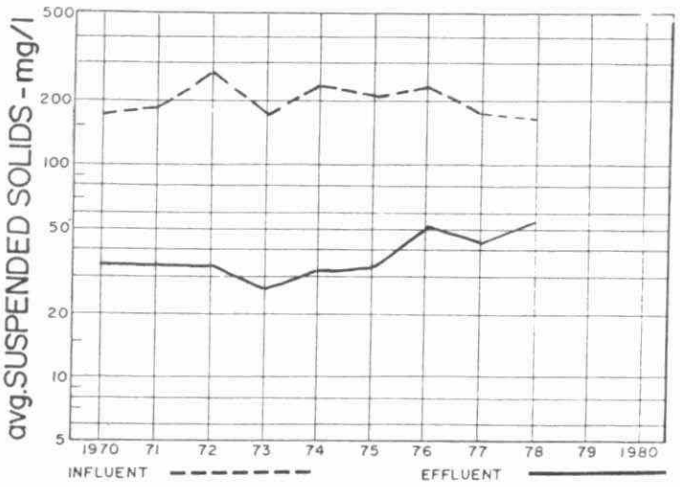
#11: Beaver Street P.S.
Type: Flygt submersible
Size: Two, 400 gpm











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000560 — PARRY SOUND WPCP

MUNICIPALITY : PARRY SOUND
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : PRIMARY
PHOSPHORUS REMOVAL

** COMMENT : HYDRAULIC OVERLOAD
* NO DATA AVAILABLE

CURRENT POPULATION : 5,248

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.830 MIGD — DESIGN BOD5 : 250.0 MG/L — DESIGN SUSP SOLIDS : 200.0 MG/L

	** FLOW DATA				BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				TOTAL PHOSPHORUS			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	28.270	.910	1.030	1.400	83.0	37.0	55	13.0	173.0	63.0	63	31.0	3.4	1.8	47	.4
FEB	25.120	.900			93.0	37.0	60	14.0	173.0	98.0	43	18.8	4.1	2.1	48	.5
MAR	31.690	1.020	1.630	2.800	93.0	32.0	65	19.3	194.0	60.0	69	42.4	4.0	2.4	40	.5
APR	54.770	1.820	2.550	2.900	83.0	26.0	68	31.2	414.0	80.3	80	182.7	2.6	*		
MAY	35.030	1.130	1.550	2.800	100.0	36.0	64	22.4	158.0	53.3	66	36.6	3.0	1.5	50	.5
JUN	26.200	.870	1.120	3.000	77.0	23.0	70	14.1	177.0	36.1	79	36.9	5.2	*		
JUL	22.480	.720	1.500	2.800	97.0	41.0	57	12.5	132.0	47.0	64	19.1	6.3	*		
AUG	31.770	1.020	1.420	3.000	73.0	28.0	61	14.2	111.0	47.8	56	20.0	5.4	2.0	62	1.0
SEP	30.390	1.010	1.350	3.000	48.0	17.5	63	9.2	109.0	41.5	61	20.5	5.8	1.4	75	1.3
OCT	29.110	.930	1.410	2.800	49.0	21.0	57	8.1	96.0	48.4	49	13.8	7.4	1.8	75	1.6
NOV	29.280	.970	1.590	2.300	105.0	22.0	79	24.3	153.0	37.8	75	33.7	6.8	*		
DEC	33.310	1.070	1.540	2.500	83.0	35.0	57	15.9	128.0	44.9	64	27.6	7.1	2.1	70	1.6
TOTAL	377.420							198.2				483.1				7.4
AVERAGE		1.031	MAXIMUM 2.550	MAXIMUM 3.000	82.0	29.6	63		168.1	54.8	67		5.0	1.8	62	
NO. OF SAMPLES					24	24			64	65			61	39		

SAULT STE. MARIE

PROJECT: City of Sault Ste Marie WPCP

PROJECT NO. 2-0020-58

TREATMENT: Primary

DESIGN FLOW: 12 mgd

BOD - 375 mg/l

SS - 300 mg/l

PRIMARY TREATMENT

COMMINUTION
Type: Six barminutors Model C
Size: 36"

GRIT REMOVAL
Type: Detritors
Size: Two, each 18' x 18' x 1.25' awd
One, 24 x 24' x 4 awd
Volume (total): 19,400 gal
Retention: 3.4 min

PRIMARY SEDIMENTATION
Size: Four, each 70' dia x 8' swd
Two, each 80' dia x 8' swd
Volume (total): 1.271 M.G.
Retention: 3.8 hr

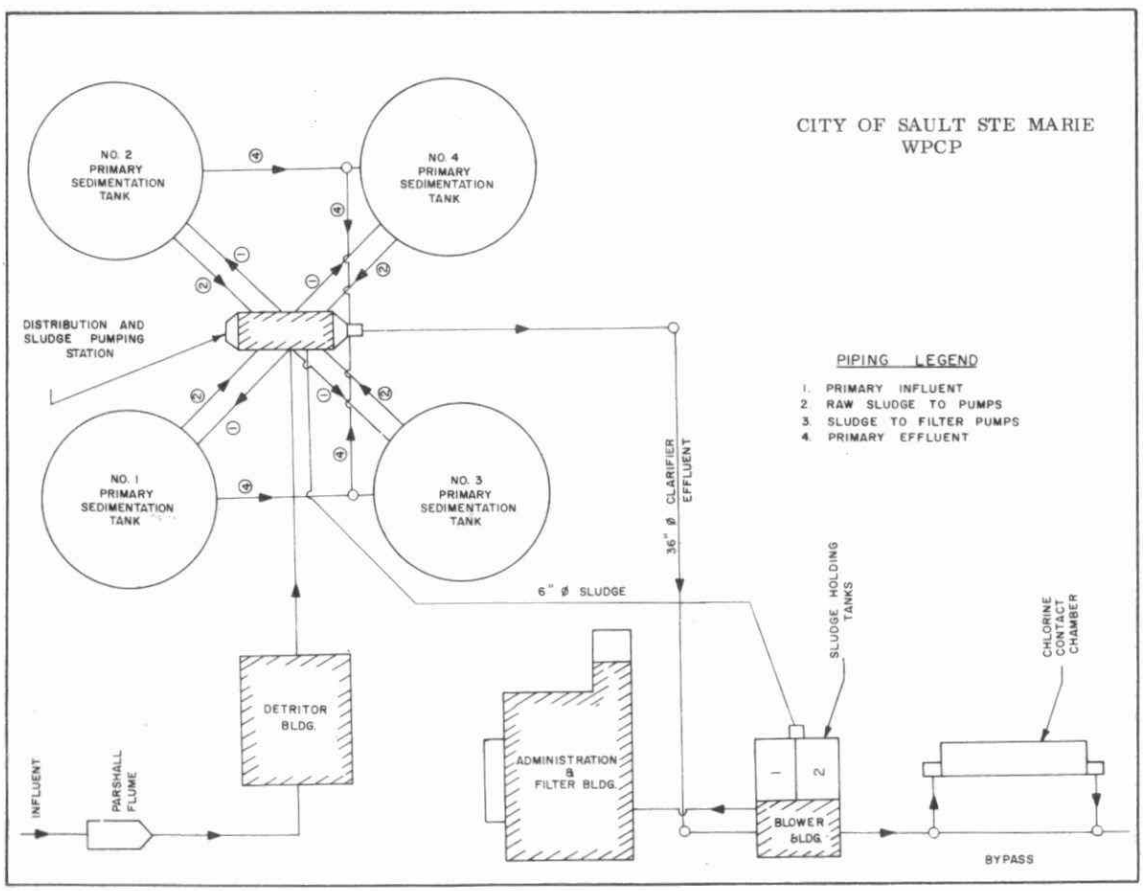
CHLORINATION
Type: Wallace and Tiernan
Size: One, 1500 lb/day
One, 500 lb/day

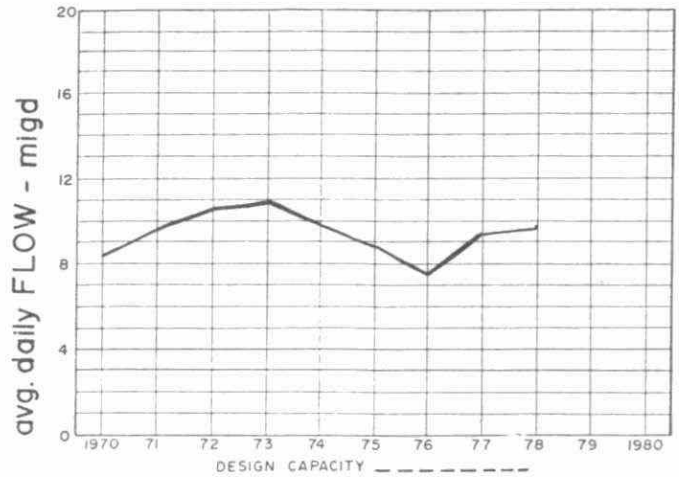
CHLORINE CONTACT CHAMBER
Size: One, 60' x 20' x 12'
One, 75' x 45' x 16.5'
Volume (total): 617,000 I.Gal
Retention: 1.9 min

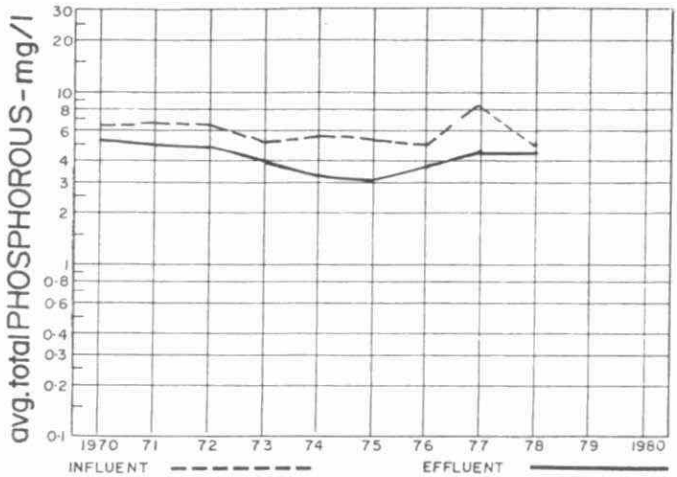
SLUDGE HANDLING

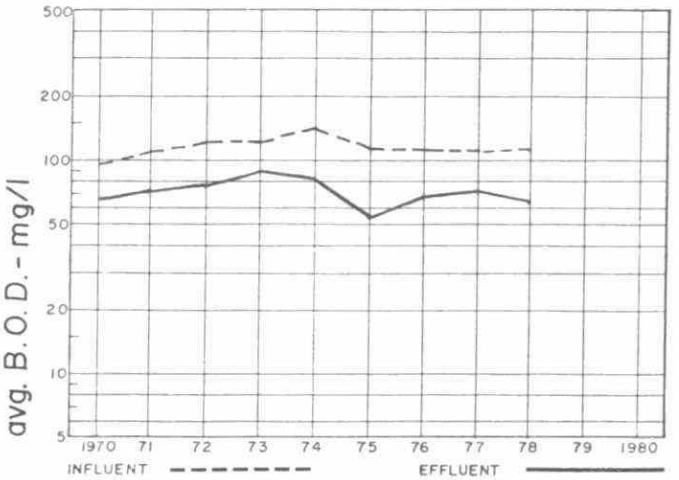
HOLDING TANKS
Size: Two, each 24' x 15' x 11.5'
Volume (total): 51,700 I.Gal

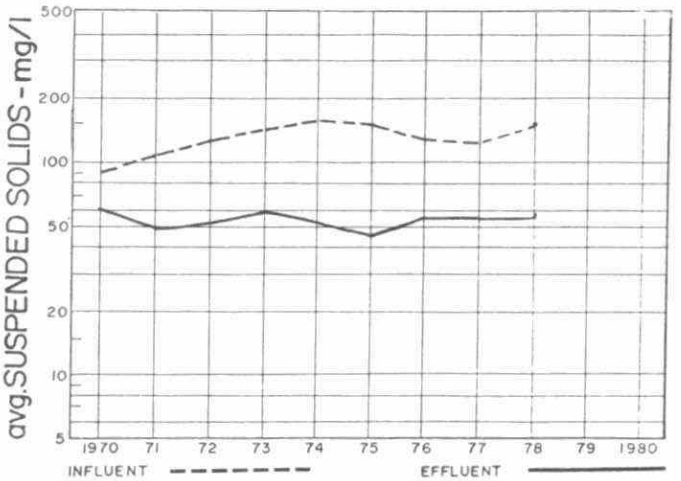
VACUUM FILTER
Type: Two, each 200 ft^2 area











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000640 — SAULT STE.MARIE WPCP

MUNICIPALITY : SAULT STE MARIE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : PRIMARY

CURRENT POPULATION : 80,524

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 12.000 MIGD — DESIGN BOD5 : 375.0 MG/L — DESIGN SUSP.SOLIDS : 300.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	205.080	6.620	7.800	9.500	207.0	87.0	57	246.0	189.0	57.0	69	270.7	6.9	4.9	28	4.1
FEB	185.120	6.610	8.800	11.000	137.0	93.0	32	81.4	150.0	70.0	53	148.0	6.1	5.0	18	2.0
MAR	272.870	8.800	16.270	25.500	123.0	85.0	30	103.6	192.0	69.0	64	335.6	5.5	9.4	-	-
APR	452.590	15.080	19.200	22.000	61.0	39.0	36	99.5	84.0	31.0	63	239.8	3.4	2.4	29	4.5
MAY	335.520	10.820	21.190	25.000	90.0	53.0	41	124.1	152.0	58.2	61	314.7	5.3	4.3	18	3.3
JUN	291.170	11.080	13.670	15.800	97.0	55.3	42	121.4	148.0	56.8	61	265.5	5.1	*		
JUL	249.800	8.100	10.210	30.000	141.0	74.0	47	167.3	174.0	57.0	67	292.2	3.7	3.4	8	.7
AUG	269.850	8.700	11.910	13.410	120.0	62.5	47	155.1	165.0	60.0	63	283.3	4.2	*		
SEP	361.740	12.050	18.260	28.000	104.0	54.0	48	180.8	149.0	61.3	58	317.2	4.6	3.6	21	3.6
OCT	423.569	13.560	26.980	32.000	106.0	53.5	49	222.3	138.0	64.0	53	313.4	*	*		
NOV	255.810	8.520	11.810	15.000	117.0	53.2	54	163.2	167.0	57.0	65	281.3	*	*		
DEC	240.520	7.750	8.320	12.000	128.0	61.0	52	161.1	134.0	55.0	58	190.0	*	*		
TOTAL	3543.639							1825.8				3251.7				18.2
AVERAGE		9.808	MAXIMUM 26.980	MAXIMUM 32.000	119.2	64.2	46		153.5	58.0	62		4.9	4.7	5	
NO. OF SAMPLES					71	68			125	102			11	6		

TIMMINS (MATTAGAMI)

PROJECT City of Timmins WPCP

PROJECT NO.	2-0071-60
TREATMENT	Primary
DESIGN FLOW	7.5 mgd
DESIGN POPULATION	30,000
BOD - Raw Sewage	180 mg/l
- Removal	35-40%
SS - Raw Sewage	200 mg/l
- Removal	60-65%

RAW SEWAGE PUMPS

Screening

Type: Manually Cleaned
Size: 1 3/4" openings

Pumps

Type: Worthington
Size: One 3650 gpm @ 26' tdh
One 3120 gpm @ 26' tdh
One 3120 gpm @ 26' tdh (diesel)

PRIMARY TREATMENT

Comminution

Type: Chicago Pump Barminutor
Size: One Model C (36')

Grit Removal

Type: Aerated
Size: One 13' x 18 3/4' x 12½'
(19,000 gal)
Retention: 9.1 min
Air Supply: Two Sutorbilt

Primary Sedimentation

Type: Jeffrey
Size: Two 125' x 20' x 12' (avg)
(374,000 gal)
Retention: 3.0 hr
Loading: Surface, 600 gal/ft^2/day
Weir, 9900 gal/ft/day

CHLORINATION

Type: F & P
Size: One 200 lb/day

Chlorine Contact Chamber

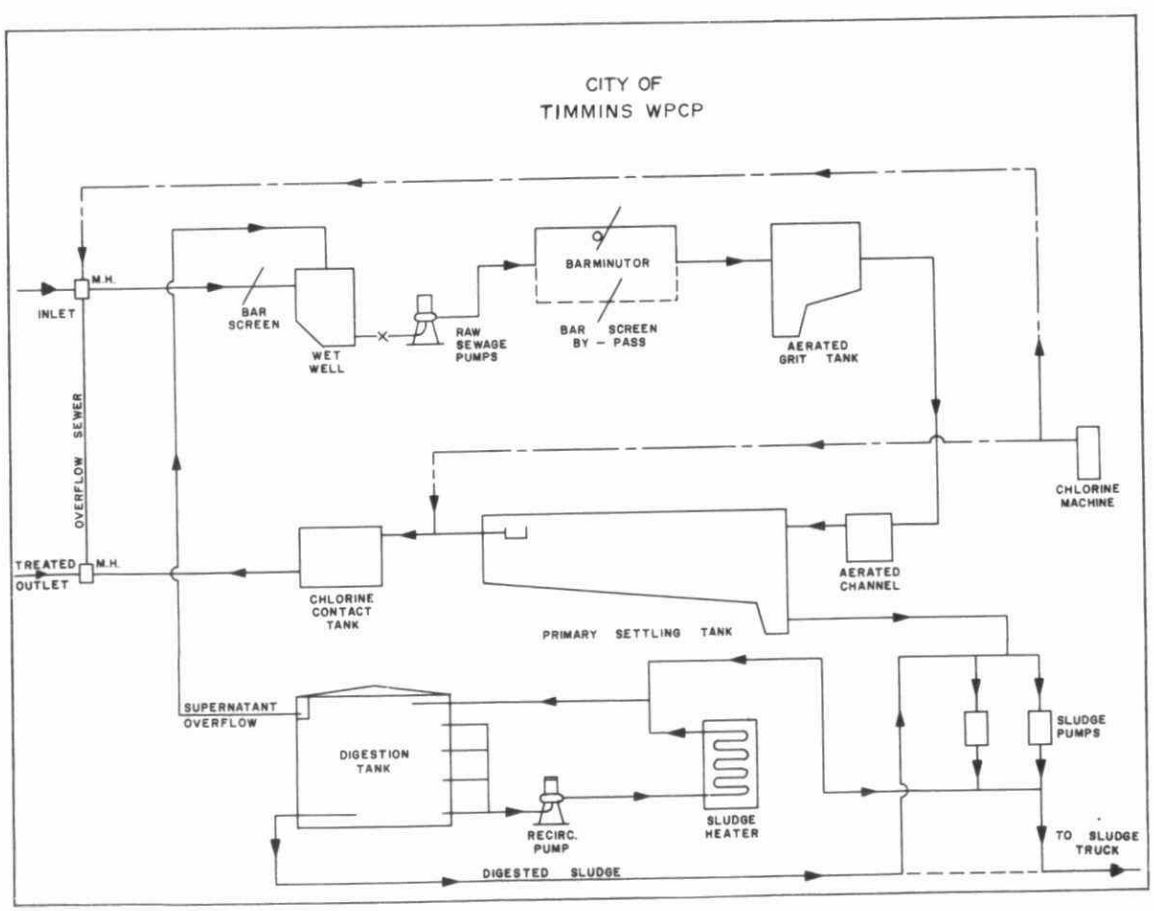
Size: Two 47½' x 7' x 9'7"
(37,400 gal)
Retention: 19 min

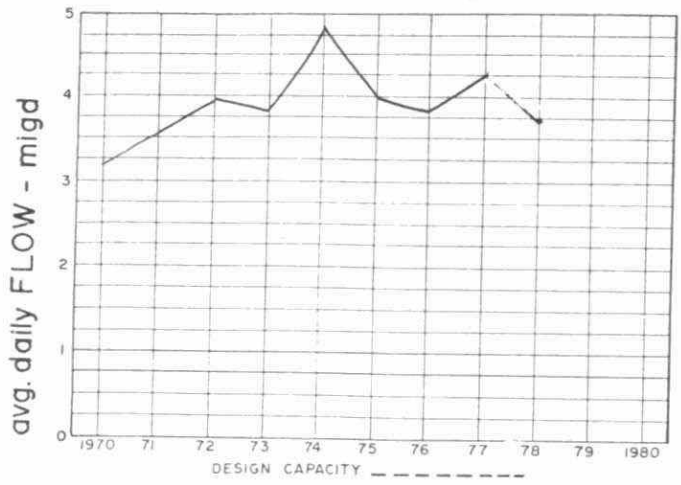
OUTFALL

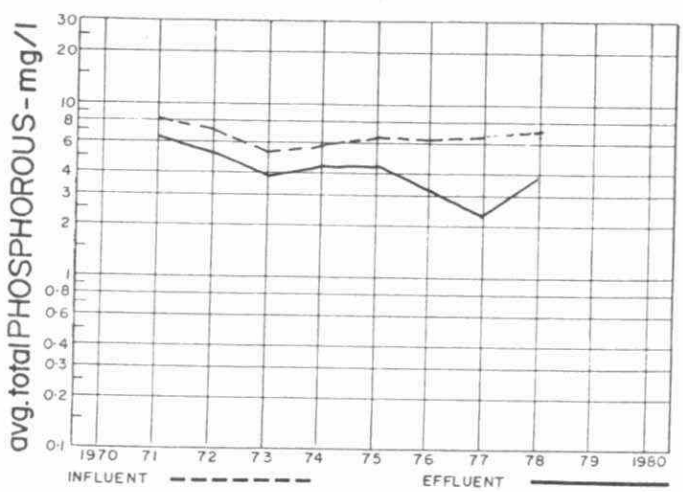
To Mattagami River

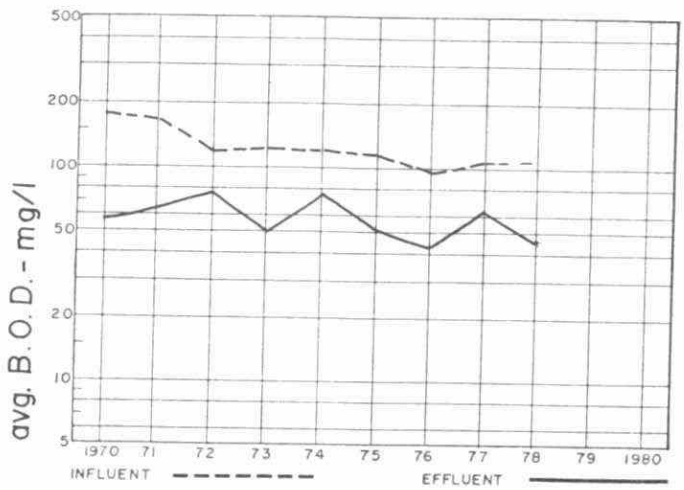
SLUDGE HANDLING

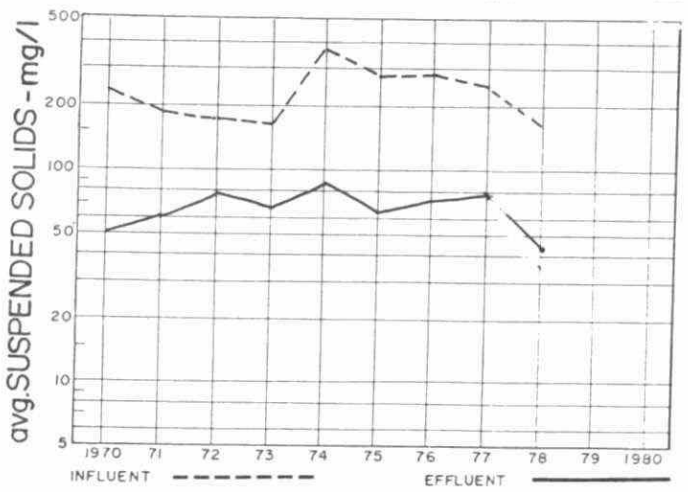
Digestion System - single-stage, concrete
Type: PFT (gas mixed)
Size: One 65' dia x 24' swd (80,000 cu ft or 0.50 mil gal)
Loading: 1.35 lb/cu ft/mo











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000766 — MATTAGAMI W P C P

MUNICIPALITY : TIMMINS
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : PRIMARY

CURRENT POPULATION : 44,251

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 7.500 MIGD — DESIGN BOD5 : 180.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	117.660	3.800	4.250	6.800	125.0	46.0	63	92.9	194.0	57.0	70	161.1	8.2	2.7	67	6.4
FEB	96.280	3.440	4.200		120.0	44.0	63	73.1	202.0	64.0	68	132.8	8.3	3.4	59	4.7
MAR	104.680	3.370	4.430		155.0	84.0	45	74.3	214.0	72.0	66	148.6	8.7	5.7	34	3.1
APR	149.620	4.990	7.800	8.200	100.0	54.0	46	68.8	107.0	30.5	71	114.4	7.5	4.3	42	4.7
MAY	133.550	4.310	6.200	6.800	100.0	48.5	51	68.7	148.0	62.5	57	114.1	7.0	6.3	10	.9
JUN	124.700	4.160	6.970	7.000	129.0	53.5	58	94.1	205.0	60.0	70	180.8	6.0	4.9	17	1.3
JUL	107.680	3.470	4.430		70.0	16.0	77	58.1	80.0	20.0	75	64.6	6.0	1.9	68	4.4
AUG	116.960	3.770	4.930		130.0	20.0	84	128.6	145.0	25.0	82	140.3	6.8	2.6	61	4.9
SEP	101.220	3.370	3.600		90.0	46.5	48	44.0	120.0	35.0	70	86.0	6.5	4.5	30	2.0
OCT	113.570	3.660	4.200		120.0	42.0	65	88.5	190.0	30.0	84	181.7	6.5	2.8	56	4.2
NOV	93.400	3.100	4.500	5.800	120.0	36.0	70	78.4	190.0	20.0	89	158.7	7.2	2.5	65	4.3
DEC	110.800	3.570	5.700	7.700	98.0	85.0	13	14.4	180.0	40.0	77	155.1	6.7	4.3	35	2.6
TOTAL	1370.120							883.9				1638.2				43.5
AVERAGE		3.751	MAXIMUM 7.800	MAXIMUM 8.200	113.0	47.9	57		164.5	43.0	73		7.1	3.8	46	
NO. OF SAMPLES					19	19			37	35			19	19		

Ministry of the Environment
Ontario

Northwestern Region
⑥

REGIONAL OFFICE
THUNDER BAY
435 James St. S.
P.O. Box 5000
807-475-1205

DISTRICT OFFICE
Kenora
808 Robertson St.
807-468-5578

James Bay
KENORA
THUNDER BAY
Lake Superior

FORT FRANCES

PROJECT Town of Fort Frances WPCP

PROJECT NO.	2-0059-60
TREATMENT	Primary
DESIGN FLOW	2.0 mgd
DESIGN POPULATION	12,000
BOD - Raw Sewage	130 mg/l
- Removal	40%
SS - Raw Sewage	180 mg/l
- Removal	60%

PRIMARY TREATMENT

Screening

- Coarse bar screen (2")

Comminution

Type: Smith & Loveless Model 15R

Grit Removal

Type: Aerated; grit removed by clamshell bucket
Size: One 10' 5" x 10' 5" x 13' 9" swd (1515 cu ft or 9,400 gal)
Retention: 6.8 min

Air Supply

Type: Roots-Connersville
Size: One 100 scfm @ 9 psi

Primary Sedimentation

Type: Eimco Process
Size: Two 40' x 40' x 10' swd (32,000 cu ft or 200,000 gal)
Retention: 2.4 hours
Loading: Surface, 625 gal/ft^2/day
Weir, 9,660 gal/ft/day

CHLORINATION

Type: W & T Model A-731
Size: 400 lb/day

Chlorine Contact Chamber

Size: 27' x 20' x 8.5' (avg) (4,590 cu ft or 28,600 gal)
Retention: 20.6 min

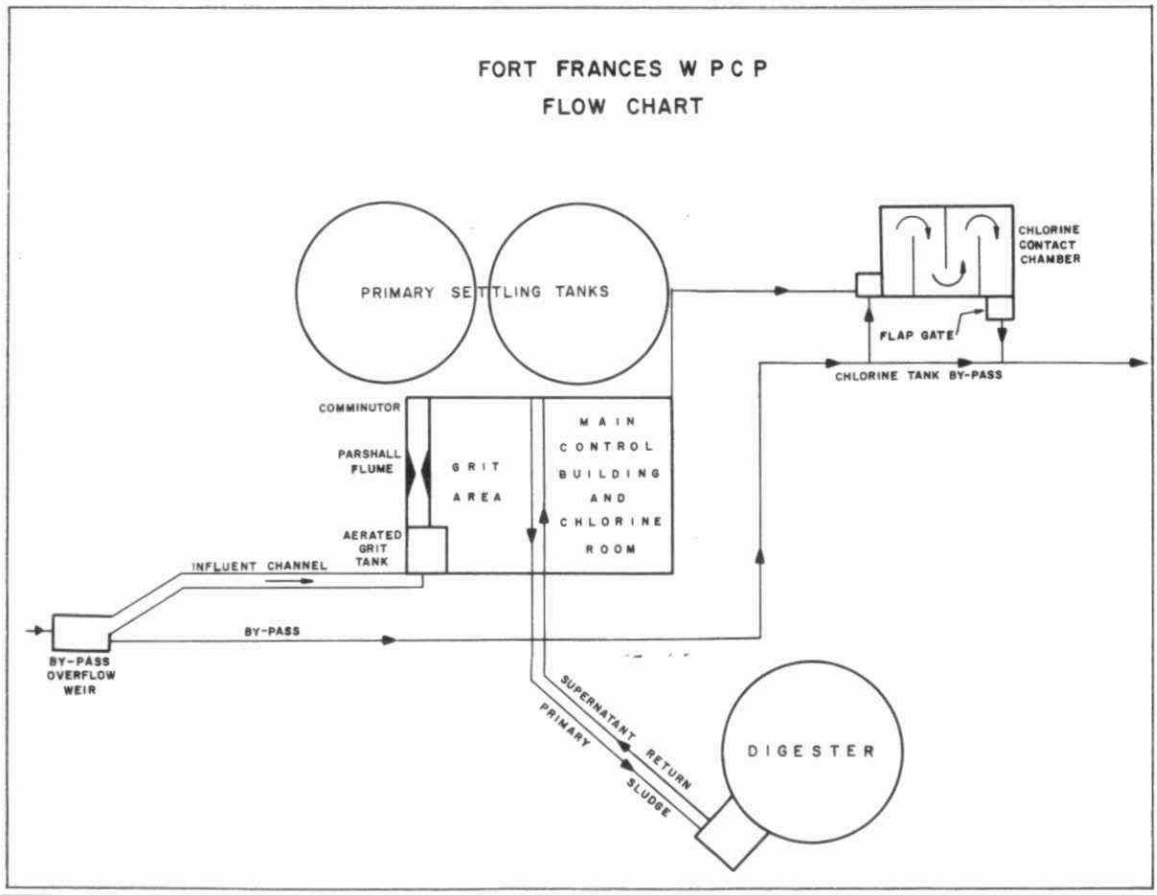
OUTFALL

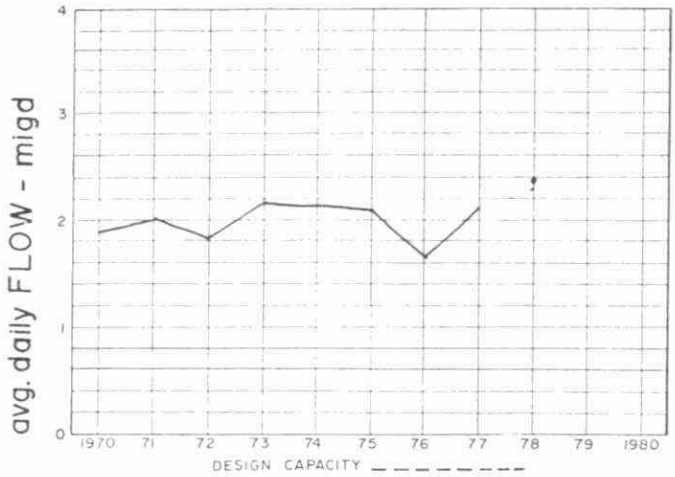
- to Rainy River

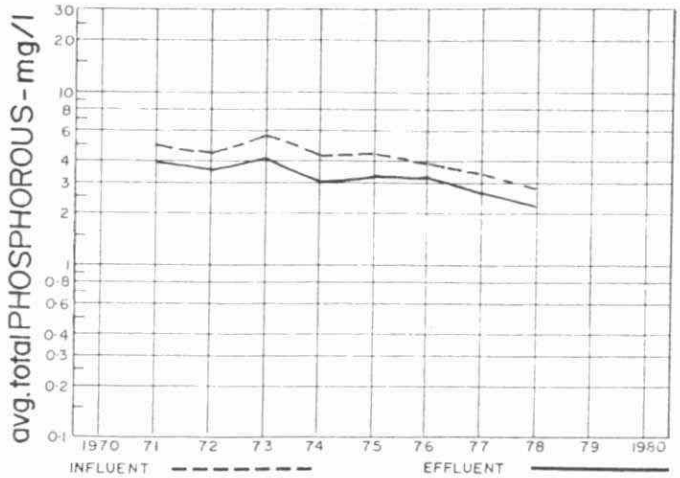
SLUDGE HANDLING

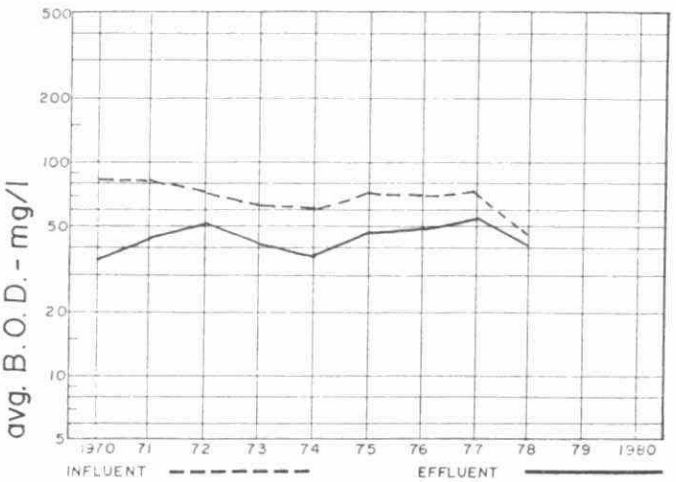
Digestion System

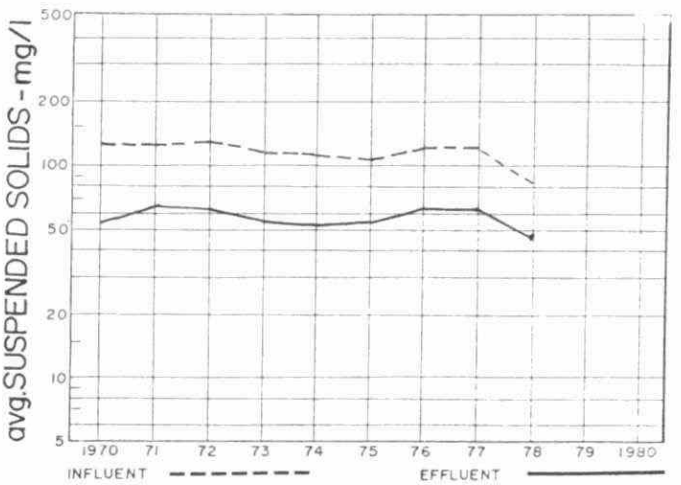
Type: Single stage with floating cover; gas mixed
Size: One 40' dia x 25' swd (31,500 cu ft or 195,500 gal)
Loading: 1.38 lb/cu ft/mo
Mixer: Roots-Connersville Type XA











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000258 — FORT FRANCES WPCP — MUNICIPALITY : FORT FRANCES
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : PRIMARY — CURRENT POPULATION : 9,088

* DATA NOT AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 2.000 MIGD — DESIGN BOD5 : 130.0 MG/L — DESIGN SUSP SOLIDS : 180.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	67.070	2.160	2.680		59.0	48.0	18	7.3	71.0	53.0	25	12.0	3.7	2.7	27	.6
FEB	57.580	2.060	2.550		58.0	47.0	18	6.3	109.0	45.0	58	36.8	*	*		
MAR	61.380	1.980	2.840		51.0	38.0	25	7.9	92.0	49.0	46	26.3	3.6	2.9	19	.4
APR	85.110	2.840	4.100	5.000	57.0	48.0	15	7.6	80.0	61.0	23	16.1	2.3	1.8	21	.4
MAY	83.000	2.670	4.100	6.000	75.0	48.0	36	22.4	81.0	55.6	31	21.0	*	*		
JUN	82.100	2.700	4.600	5.100	40.0	40.0			79.0	47.0	40	26.2	3.4	2.8	17	.4
JUL	88.200	2.840	4.000	6.000	*	24.0			88.0	42.5	51	40.1	2.0	2.0		
AUG	84.900	2.730	3.400	5.400	33.0	25.0	24	6.7	52.0	37.8	27	12.0	1.8	1.8		
SEP	80.300	2.670	4.600	5.000	28.0	33.0	-	-	91.0	44.0	51	37.7	1.8	1.8		
OCT	68.400	2.206	2.600	3.000	36.0	38.0	-	-	97.0	74.5	23	15.3	2.6	2.8	-	-
NOV	60.600	2.020	2.200	2.600	*	50.0			90.0	47.0	47	26.0	*	3.0		
DEC	58.200	1.870	2.100	2.600	60.0	55.0	8	2.9	81.0	42.0	48	22.6	4.5	3.3	26	.6
TOTAL	876.840							61.1				292.1				2.4
AVERAGE		2.396	MAXIMUM 4.600	MAXIMUM 6.000	49.7	41.1	17		84.2	49.8	40		2.8	2.4	12	
NO. OF SAMPLES					28	30			54	54			9	10		

CONVENTIONAL ACTIVATED SLUDGE PLANTS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
220 11th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
WINDSOR
Lake Erie

PROJECT City of Chatham WPCP

PROJECT NO. 2-0102-62

TREATMENT Activated Sludge

DESIGN FLOW 4.5 mgd

DESIGN POPULATION 45,000

BOD - Raw Sewage 250 mg/l
- Removal 90%

SS - Raw Sewage 250 mg/l
- Removal 90%

RAW SEWAGE

Screening

- One manually-cleaned bar screen

Pumps

Type: Worthington
Size: Three 3750 gpm @ 47' tdh
One 3750 gpm @ 47' tdh
(electric & standby diesel)

PRIMARY TREATMENT

Grit Removal

Type: Aerated, with clamshell bucket
Size: One 27' x 14' x 11 2/3 (avg)
(27,450 gal)
Retention: 8.8 min
Air Supply: One Sutorbilt

Comminution

Type: Barminutor
Size: Two model C

Primary Sedimentation

Type: Jeffrey, two-pass
Size: Two 80' x 32' x 12' (avg)
(382,000 gal)
Retention: 2.05 hr
Loading: Surface, 878 gal/ft^2/day
Weir, 9400 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air; triple pass
Size: Two 130' x 63' x 14'
(1.43 mil gal)
Retention: 7.6 hr

Diffusers

Type: Schumacher tubes
125 per pass on 12" centres

Air Supply

Type: Sutorbilt
Size: Three 2500 cfm

Secondary Sedimentation

Type: Jeffrey
Size: Two 120' x 32' x 12' (avg)
(574,000 gal)
Retention: 3.08 hours
Loading: Surface, 586 gal/ft^2/day
Weir, 8780 gal/ft/day

CHLORINATION

Type: F & P
Size: One 2000 lb/day
One 400 lb/day

Chlorine Contact Chamber

Size: One 33.6' x 30' x 10' (62,300 gal)
Retention: 22 min

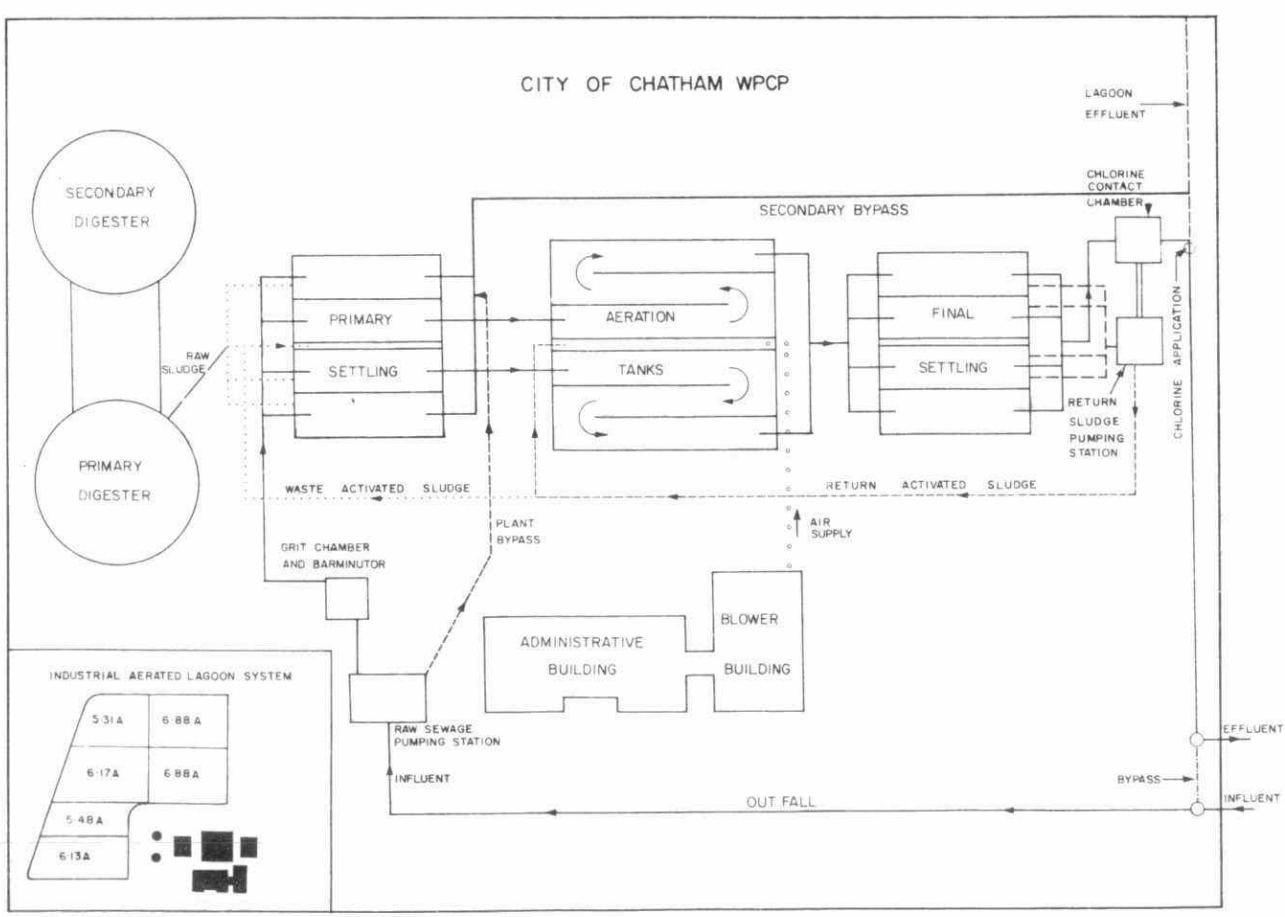
OUTFALL

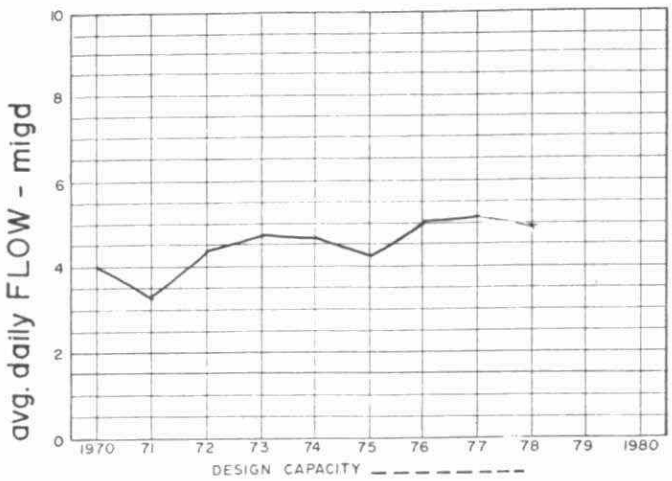
- 1,025' to Thames River

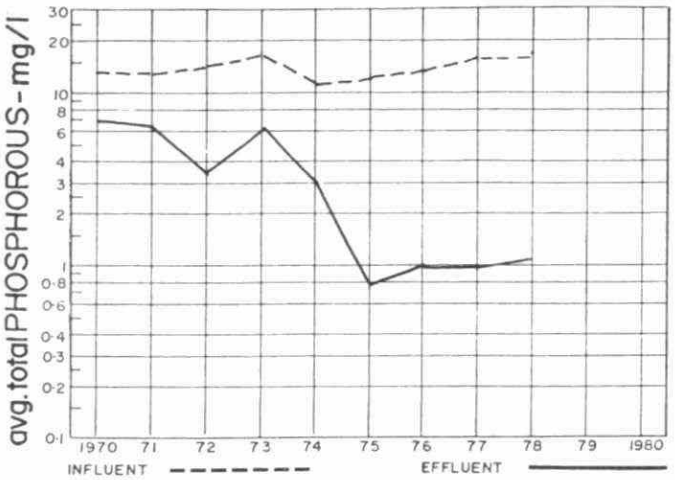
SLUDGE HANDLING

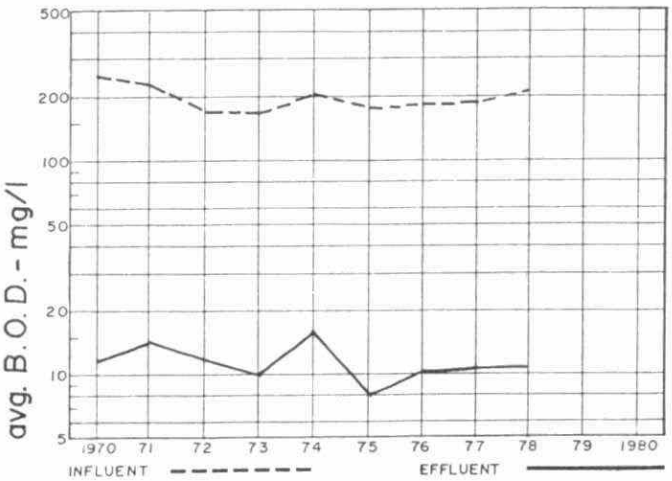
Digestion System - Two-stage
Primary--
Type: Gas mixed, fixed cover
Size: One 65' dia x 25' (83,000 cu ft
or 0.52 mil gal)

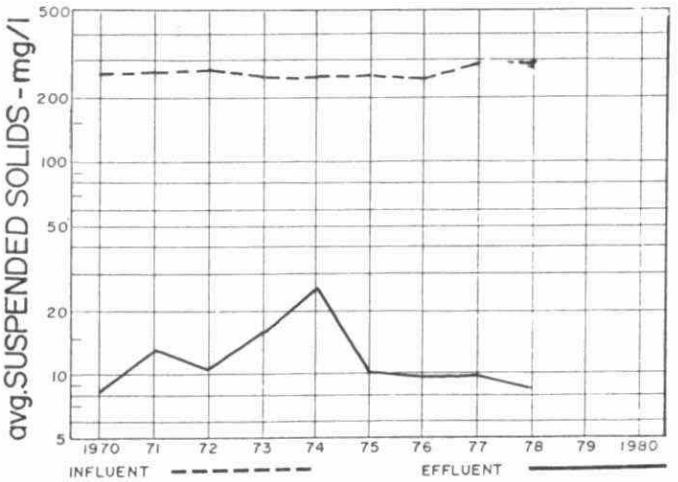
Secondary--
Type: Fixed cover
Size: One 65' dia x 25' (82,000 cu ft
or 0.51 mil gal)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000098 CHATHAM WPCP

MUNICIPALITY : CHATHAM
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 39,960

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 4.500 MIGD DESIGN BOD5 : 250.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
							REDUCTION					REDUCTION				REDUCTION
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	139.900	4.500	5.700		219.0	6.0	97	297.9	281.0	7.0	97	383.3	27.9	3.8	86	33.7
FEB	115.300	4.100	5.700		238.0	14.7	93	257.4	257.0	7.0	97	288.2	26.3	2.0	92	28.0
MAR	214.700	6.900	15.800		157.0	9.0	94	317.7	261.0	7.0	97	545.3	12.3	.8	93	24.6
APR	181.600	6.050	9.200	17.600	133.0	8.0	93	227.0	261.0	6.0	97	463.0	11.1	.9	91	18.5
MAY	139.400	4.500	5.600	16.500	271.0	16.3	93	355.0	255.0	7.0	97	345.7	11.9	.5	95	15.8
JUN	116.300	3.900	5.200	19.400	194.0	14.3	92	208.9	336.0	8.0	97	381.4	16.7	1.5	91	17.6
JUL	125.500	4.000	6.200	15.400	181.0	7.0	96	218.3	321.0	9.0	97	391.5	19.5	1.0	94	23.2
AUG	179.800	5.800	8.000	18.200	147.0	8.6	94	248.8	294.0	8.5	97	513.3	17.5	.5	97	30.5
SEP	194.300	6.500	9.800	20.000	194.0	8.0	95	361.3	383.0	16.0	95	713.0	19.1	.8	95	35.5
OCT	125.400	4.050	8.300	17.400	218.0	6.6	96	265.0	307.0	14.0	95	367.4	19.9	.9	95	23.8
NOV	139.200	4.640	8.800	17.800	274.0	9.3	96	368.4	327.0	8.6	97	443.2	19.6	.8	95	26.1
DEC	146.700	4.730	8.700	18.500	187.0	15.9	91	251.0	252.0	8.8	96	356.7	12.8	.5	96	18.0
TOTAL	1818.100							3376.7				5192.0				295.3
AVERAGE		4.973	MAXIMUM 15.800	MAXIMUM 20.000	201.0	10.3	94		294.5	8.9	96		17.8	1.1	93	
NO. OF SAMPLES					59	57			252	249			78	79		

Project Town of Ingersoll WPCP
Project No: 1-0076-67
Treatment: Conventional Activated Sludge
Design Flow: 2.25 MGD
(Old Plant 0.75 MGD -
New plant 1.5 MGD)
BOD: Raw sewage 200 mg/l
SS: Raw sewage 200 mg/l

PRETREATMENT (Common)

BAR SCREENS:
Manually cleaned, in wet well influent channel

RAW SEWAGE PUMPING:
Two, size 1120 USGPM - variable-speed
Two, size 2240 USGPM - variable speed

COMMINUTION:
One comminutor, Capacity 6.75 MGD

GRIT REMOVAL:
Aerated grit tank
Size: 11'8" x 14' x 10' awd
Volume: 10500 I. Gal. Detention: 1.8 min.

OLD PLANT

PRIMARY SEDIMENTATION:
Two, each 12' x 40' x 10' swd (avg)
Volume: 60,000 I. Gal. Detention: 1.9 hours
Overflow rate: 780 I. Gal/day/sq. ft.

AERATION TANKS:
Two, each 30' x 54' x 15' swd (avg)
Volume: 300,000 I. Gal. Detention: 9.7 hours
Fine bubble diffusion
Blowers: Two, size: each 764 cfm at 7.5 psi

SECONDARY SEDIMENTATION:
Two, 15' x 45' x 12' swd (avg)
Volume: 100,000 I. Gal. Detention: 3.2 hours
Overflow rate: 550 gal/day/sq. ft.

CHLORINE CONTACT CHAMBER:
Size: 18' x 12' x 11' swd
Volume: 13,000 I. Gal. Detention: 25 min.

SLUDGE HOLDING TANK:
Size : 11' x 25' x 12'6" swd
Volume: 22,000 I. Gal.

NEW PLANT

PRIMARY SEDIMENTATION:

Two, 16' x 65' x 11' swd (avg)
Volume: 142,000 I. Gal.
Detention: 2.3 hours
Overflow rate: 720 I. gal/ft^2/day

AERATION TANKS:
Two, each with two cells 30' square x 13' swd
Volume: 270,000 I. Gal.
Detention: 4.3 hours

SECONDARY SEDIMENTATION:
Two, each 16' x 78' x 12' swd
Volume: 187,000 I. Gal.
Detention: 3 hours
Overflow rate: 600 I. Gal/ft^2/day

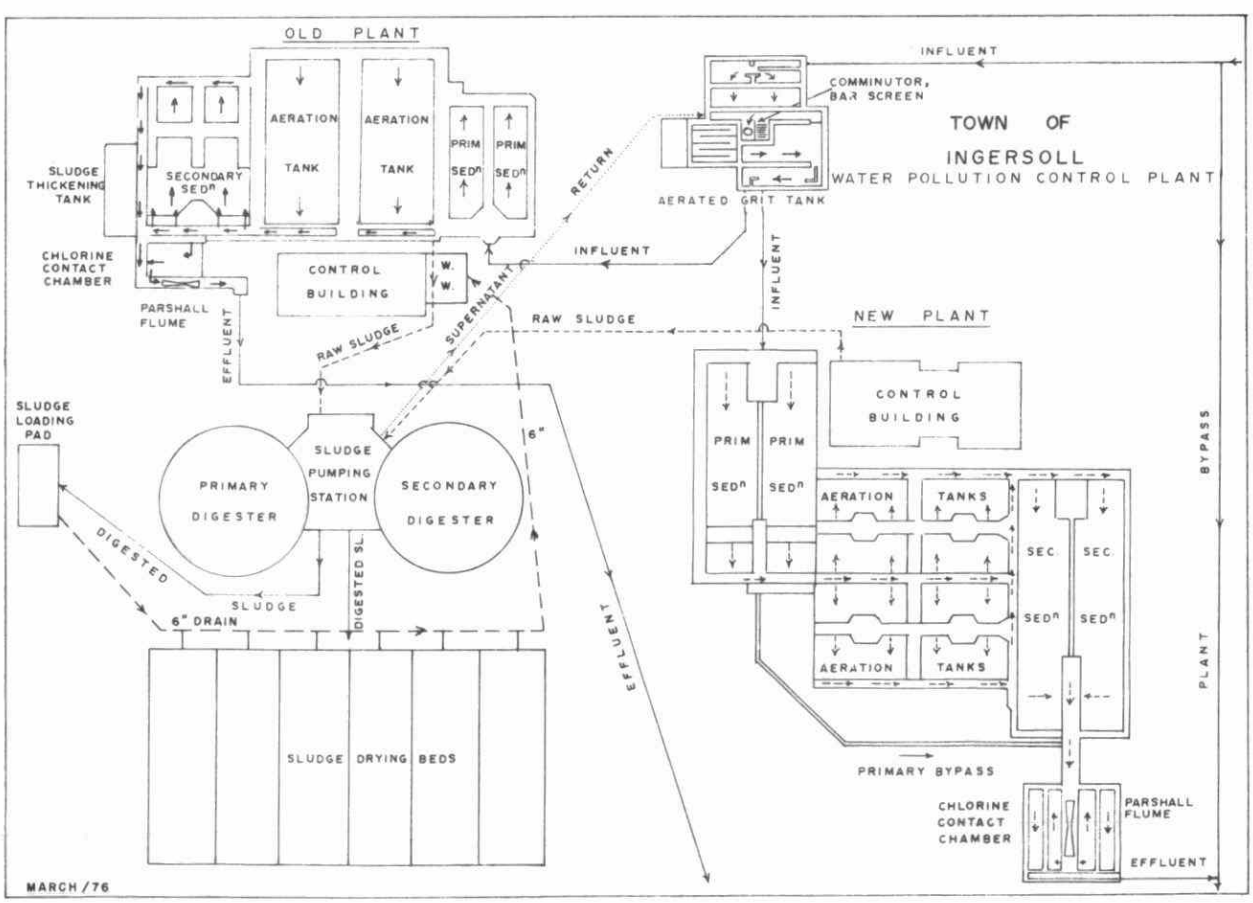
CHLORINE CONTACT CHAMBER:
Size: 26'6" x 24' x 10'3" swd
Volume: 41000 I. Gal.
Detention: 35 min.

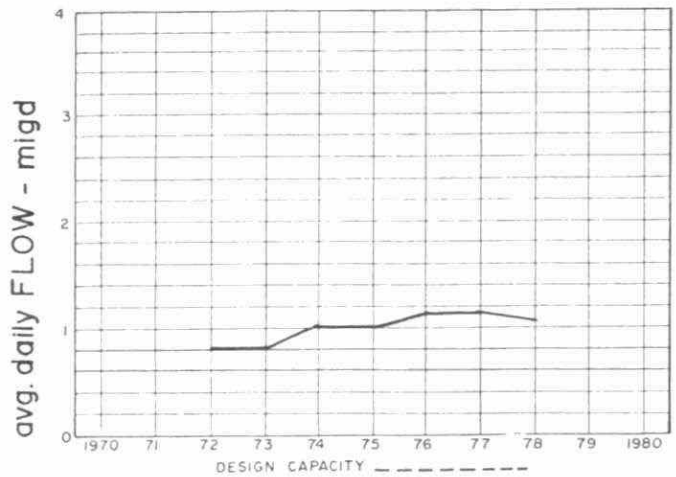
SLUDGE HANDLING (Common)

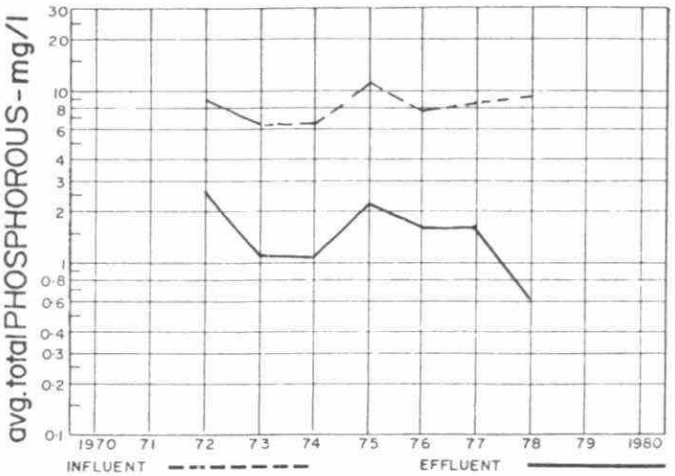
PRIMARY DIGESTER:
Size 45' dia. x 21'3" swd
Volume: 36,000 ft^3.

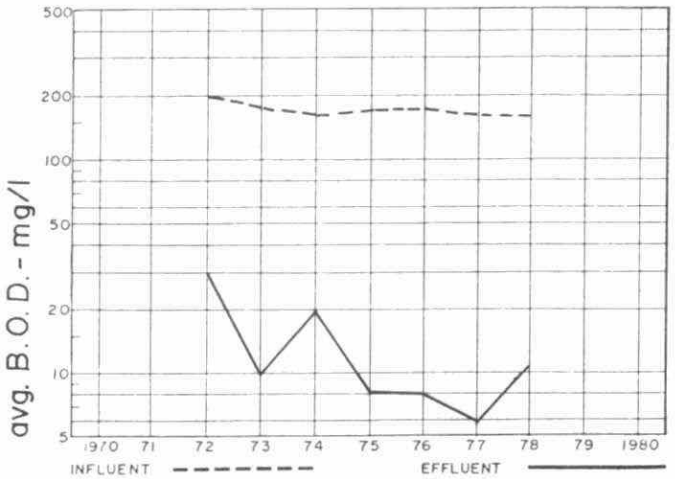
SECONDARY DIGESTER:
Size: 45' dia. x 25'
Volume: 39,000 ft^3

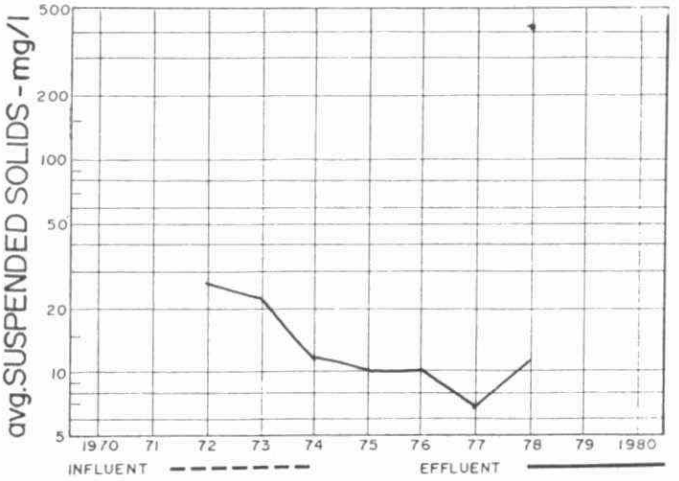
SLUDGE DRYING BEDS:
Six, each 20' x 75'
Area: 9000 ft^2.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000356 * INGERSOLL WPCP

MUNICIPALITY : INGERSOLL
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

* COMMENT: THIS PLANT IS OPERATED IN TWO SECTIONS

CURRENT POPULATION : 8,252

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 2.250 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	31.540	1.020			169.0				200.0				6.0			
FEB	24.060	.860			108.0				271.0				6.5			
MAR	41.560	1.340			188.0				565.0				7.5			
APR	37.644	1.254			118.0				168.0				9.7			
MAY	43.282	1.396			180.0				197.0				6.7			
JUN	36.400	1.213			130.0				412.0				7.2			
JUL	33.859	1.092			215.0				256.0				8.3			
AUG	36.206	1.168			166.0				294.0				8.9			
SEP	37.360	1.245			212.0				607.0				19.5			
OCT	37.172	1.199			221.0				282.0				7.6			
NOV	31.460	1.049			84.0				396.0				14.0			
DEC	34.883	1.125			310.0				1200.0				34.0			
TOTAL	425.426							736.6				1,717.6				42.4
AVERAGE		1.163	MAXIMUM	MAXIMUM	175.0				404.0				11.3			
NO. OF SAMPLES					23				24				23			

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110003978 * INGERSOLL PLANT A

MUNICIPALITY : INGERSOLL (PLANT A)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY HOLDING TANKS

* COMMENT: THIS PLANT IS OPERATED IN TWO SECTIONS AND THIS SECTION TREATS 1/3 OF THE FLOW

CURRENT POPULATION : 8,252

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.750 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	9.640	.310	.390		169.0	9.0	94	15.4	200.0	6.0	97	18.7	6.0	.4	93	.5
FEB	7.720	.280	.340		108.0	28.0	74	6.1	271.0	18.0	93	19.5	6.5	.6	90	.4
MAR	11.920	.380	.710		188.0	5.0	97	21.8	565.0	4.0	99	66.8	7.5	.4	94	.8
APR	15.134	.504	.702	1.138	118.0	5.2	95	17.0	168.0	6.0	96	24.5	9.3	.7	92	1.3
MAY	11.391	.367	.481	.805	180.0	6.8	96	19.7	197.0	22.0	88	19.9	6.7	.6	91	.6
JUN	9.705	.324	.625	1.000	130.0	6.0	95	12.0	412.0	8.0	98	39.2	7.2	1.2	83	.5
JUL	8.237	.266	.400	.683	215.0	4.0	98	17.3	256.0	8.5	96	20.3	8.3	1.0	87	.6
AUG	8.780	.283	.300	.875	166.0	4.1	97	14.2	294.0	5.0	98	25.3	8.9	.7	92	.7
SEP	9.523	.317	.433	.700	212.0	3.8	98	19.8	607.0	7.8	98	57.0	19.5	.4	97	1.8
OCT	9.675	.312	.432	.575	221.0	4.4	98	20.9	282.0	7.5	97	26.5	7.6	.7	90	.6
NOV	7.284	.242	.318	.650	84.0	5.2	93	5.7	396.0	6.0	98	28.4	14.0	.9	93	.9
DEC	9.524	.307	.566		310.0	9.6	96	28.6	1200.0	12.0	99	113.1	34.0	.6	98	3.1
TOTAL	118.533							198.5				459.2				11.8
AVERAGE		.324	MAXIMUM .710	MAXIMUM 1.138	175.0	7.5	95		404.0	9.2	97		11.2	.6	93	
NO. OF SAMPLES					21	14			22	16			16	16		

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110003969 * INGERSOLL PLANT B

MUNICIPALITY : INGERSOLL (PLANT B)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY HOLDING TANKS

* COMMENT: THIS PLANT IS OPERATED IN TWO SECTIONS AND THIS SECTION TREATS 2/3 OF THE FLOW

CURRENT POPULATION : 8,252

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.500 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	21.900	.700	.950		169.0	20.0	88	32.6	200.0	10.0	95	41.6	6.0	.8	86	1.1
FEB	16.340	.580	.720		108.0	29.0	73	12.9	271.0	18.0	93	41.3	6.5	.6	90	.9
MAR	29.640	.960	2.570		188.0	7.0	96	53.6	565.0	3.0	99	166.5	7.5	.4	94	2.1
APR	37.629	1.254	1.754	3.640	118.0	6.8	94	41.8	168.0	10.0	94	59.4	9.3	.4	95	3.3
MAY	31.891	1.029	1.792	3.360	180.0	7.2	96	55.1	197.0	21.0	89	56.1	6.7	.5	92	1.9
JUN	26.695	.890	1.336	2.520	130.0	3.6	97	33.7	412.0	4.0	99	108.9	7.2	.4	94	1.8
JUL	25.622	.827	1.070	2.184	215.0	4.3	98	53.9	256.0	4.5	98	64.4	8.4	.3	96	2.0
AUG	27.426	.885	1.229	2.576	166.0	7.2	95	43.5	294.0	6.1	97	78.9	10.2	.2	98	2.7
SEP	27.837	.928	1.335	3.472	212.0	4.8	97	57.6	607.0	3.3	99	168.0	12.2	.3	97	3.3
OCT	27.497	.887	1.825	2.520	221.0	8.8	96	58.3	282.0	2.0	99	76.9	7.6	.4	94	1.9
NOV	24.176	.805	.973	2.800	84.0	3.2	96	19.5	396.0	3.5	99	94.8	14.3	.8	94	3.2
DEC	25.359	.818	1.131	2.800	310.0	11.7	96	75.6	1200.0	10.5	99	301.6	26.0	.5	98	6.4
TOTAL	322.012							538.1				1258.4				30.6
AVERAGE		.880	MAXIMUM 2.570	MAXIMUM 3.640	175.0	9.4	94		404.0	7.9	98		10.1	.4	95	
NO. OF SAMPLES					21	15			22	16			18	17		

ST. MARY'S

PROJECT Town of St. Marys WPCP

PROJECT NO. 1-0030-66

DESIGN FLOW 0.800 MIGD

BOD - 195 mg/l

SS - 200 mg/l

RAW SEWAGE PUMPING

3 FLYGT Model CP03200 submersible pumps each rated 1000 USGPM @ 40' TDH

COMMINUTOR

Type - ECODYNE Mod 25R

SCREENING

Bar Screen

DETRITOR

Type - DORR-OLIVER Type WA.
Cap. 3.8 MGD

PRIMARY CLARIFIERS

2 each 30.0' i.d.x11.5'swd
Volume (total) 104540 I. gal.
Detention: 3.1 hr.
Overflow rate: 560 gpd per sq.ft.
Raw Sludge Pumps: Type - CARTER

AERATION TANKS

2 each 36.0' i.d.x15.0'swd
Volume (total) 190,620 I.gal.
Detention: 5.7 hr.
Aerators: Type AMES-CROSTA
Return Sludge Pumps:
2 SMART-TURNER Model 3 WPCS

SECONDARY CLARIFIERS

2 each 35.0'i.d.x10.0' swd
Volume (total) 120,947 I.G.
Detention: 3.5 hr.
Overflow Rate: 415 gpd per sq.ft.

CHLORINE CONTACT CHAMBER 4-pass

2 passes4.4' wx13.0'lx9.5'swd
1 pass 4.8'wx13.0'lx9.5'swd
1 pass 6.7'wx13.0'lx9.5'swd
Volume (total) 1528 I.G.
Detention: 29 min.

CHLORINATOR TYPE

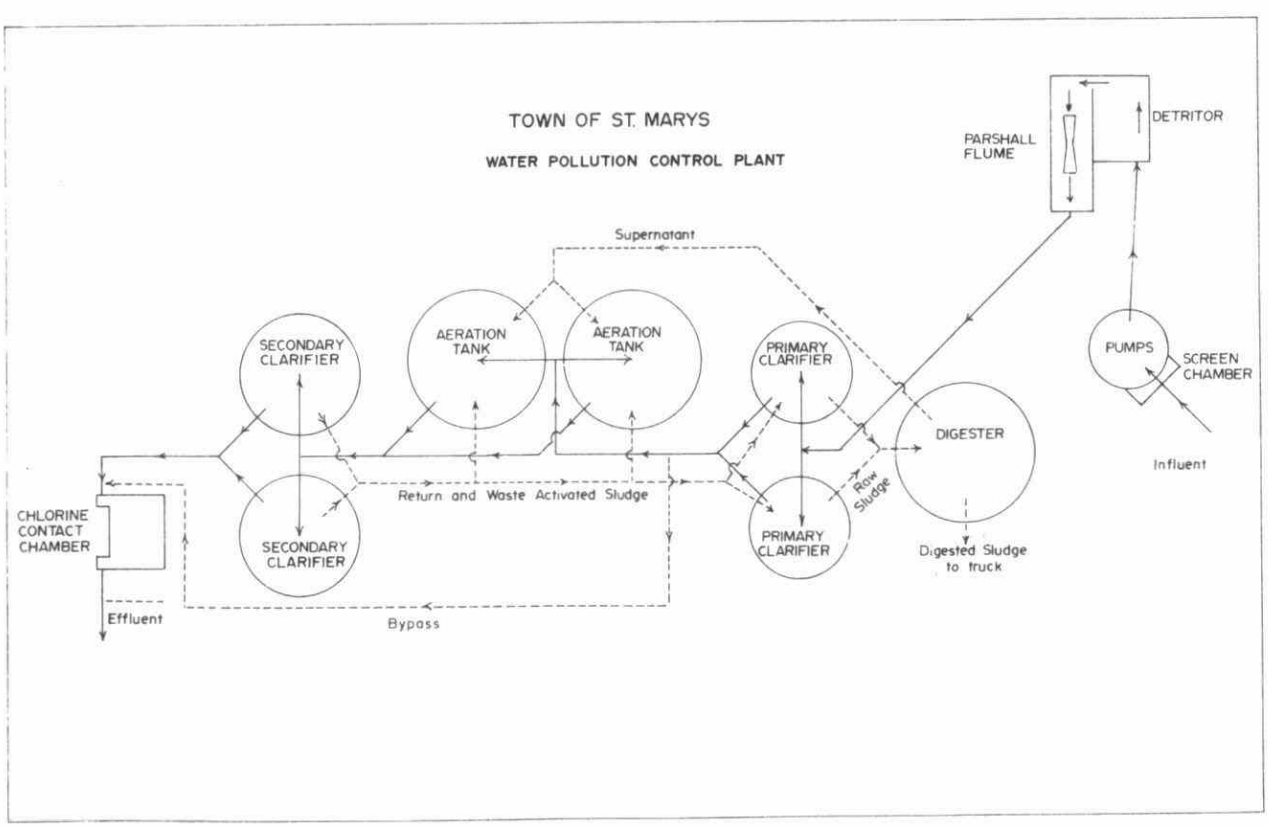
Wallace and Tiernan

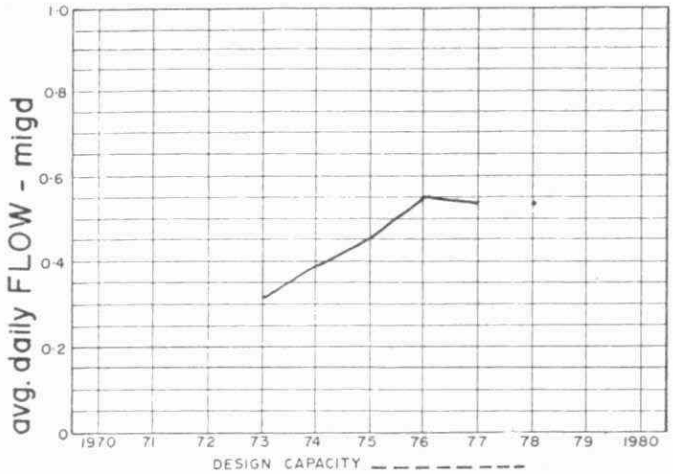
PRIMARY DIGESTER

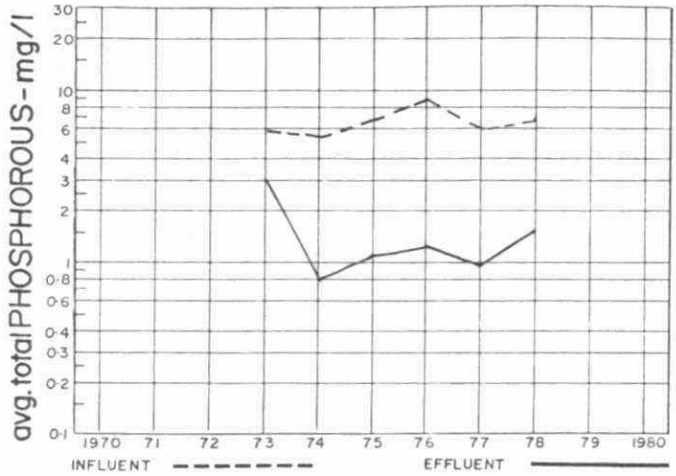
1 - 40.0' i.d.x20.0'swd
Volume: 26650 cu.ft.

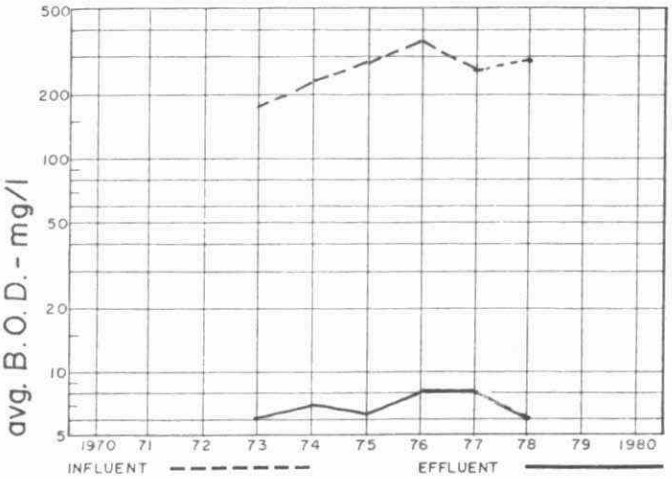
OUTFALL

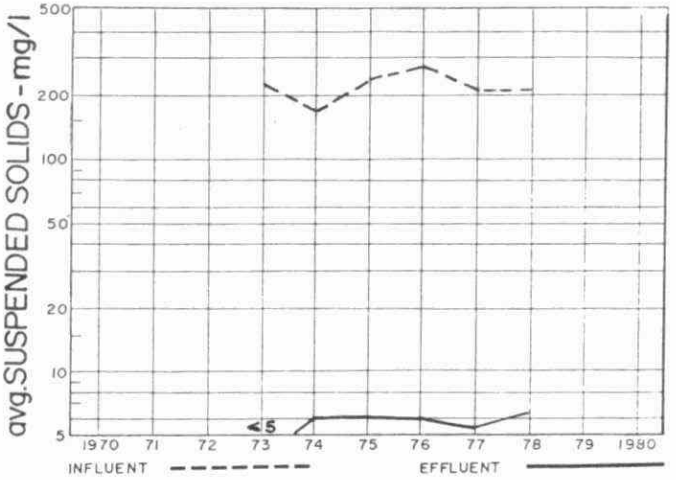
Discharge to Thames River











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001275 — ST MARY'S WPCP

MUNICIPALITY : ST MARY'S
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

CURRENT POPULATION : 4,709

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.800 MIGD — DESIGN BOD5 : 195.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	17.380	.560	.780	2.000	317.0	6.0	98	54.0	234.0	3.0	98	40.1	5.6	1.1	80	.7
FEB	14.620	.520	.600	2.000	405.0	9.0	97	57.8	214.0	3.0	98	30.8	6.8	1.5	77	.7
MAR	22.750	.730	1.050	2.000	157.0	5.0	96	34.5	596.0	7.0	98	133.9	7.4	1.0	86	1.4
APR	28.590	.950	1.644	2.000	304.0	4.0	98	85.7	165.0	7.0	95	45.1	5.1	.6	88	1.2
MAY	18.033	.582	.673	2.000	220.0	3.0	98	39.1	131.0	13.5	89	21.1	6.7	.7	89	1.0
JUN	15.187	.506	.616	2.000	243.0	7.4	96	35.7	130.0	8.3	93	18.4	7.5	2.7	64	.7
JUL	13.984	.451	.563	2.000	443.0	6.9	98	60.9	257.0	5.5	97	35.1	10.9	6.8	37	.5
AUG	12.830	.410	.585	2.000	270.0	9.3	96	33.4	213.0	8.2	96	26.2	9.0	.9	90	1.0
SEP	15.711	.524	.837	2.000	280.0	6.2	97	43.0	132.0	11.5	91	18.9	6.5	1.5	76	.7
OCT	16.718	.539	.724	2.000	257.0	5.6	97	42.0	95.0	5.8	93	14.9	6.5	1.3	80	.8
NOV	15.702	.523	.631	2.000	448.0	4.6	98	69.6	241.0	5.3	97	37.0	6.3	1.1	82	.8
DEC	16.252	.524	.810	2.000	166.0	5.3	96	26.1	132.0	1.8	98	21.1	2.2	.5	77	.2
TOTAL	207.757							581.8				442.6				9.7
AVERAGE		.568	MAXIMUM 1.644	MAXIMUM 2.000	292.5	6.0	97		211.6	6.6	96		6.7	1.6	75	
NO. OF SAMPLES					31	31			31	31			31	31		

TILLSONBURG

Project: Town of Tillsonburg WPCP
Project No.: 1-0137-67
Design Flow: 1.8 MGD
BOD: Raw Sewage - 235 mg/l
Removal 95%
SS: Raw Sewage - 250 mg/l
Removal 95%

PRIMARY TREATMENT

AIR DEGRITTER:
Size, 13' x 15' x 10' swd
Volume: 12,160 I. Gal. Detention: 9.7 min.

PRIMARY SEDIMENTATION:
Two, Size 50.3' x 10' x 8' swd
One, Size 50' x 20' x 8.25' swd
Volume: (total) 102,000 I. Gal.
Detention: 1.3 hours
Overflow Rate: 900 gal/ft^2/day

SECONDARY TREATMENT

AERATION TANKS:
Type: Diffused Air
Size: Four, size 50' x 30' x 13' swd
Volume (total): 487,000 I. Gal.
Detention: (total) 6.5 hours

SECONDARY SEDIMENTATION:
Size: Two, size 50.3' x 10' x 12.25' swd
One, size 65' x 20' x 12.5' swd
Volume (total): 178,000 I. Gal.
Detention (total) 2.4 hr.
Overflow Rate: 780 gal/ft^2/day

CHLORINATION:
Chlorinator: Type: W & T A731
Size: 400 lb/day

CHLORINE CONTACT CHAMBER:
Size: 21' x 20' x 9.2' swd
Volume: 24,000 I. Gal. Detention: 19 min.

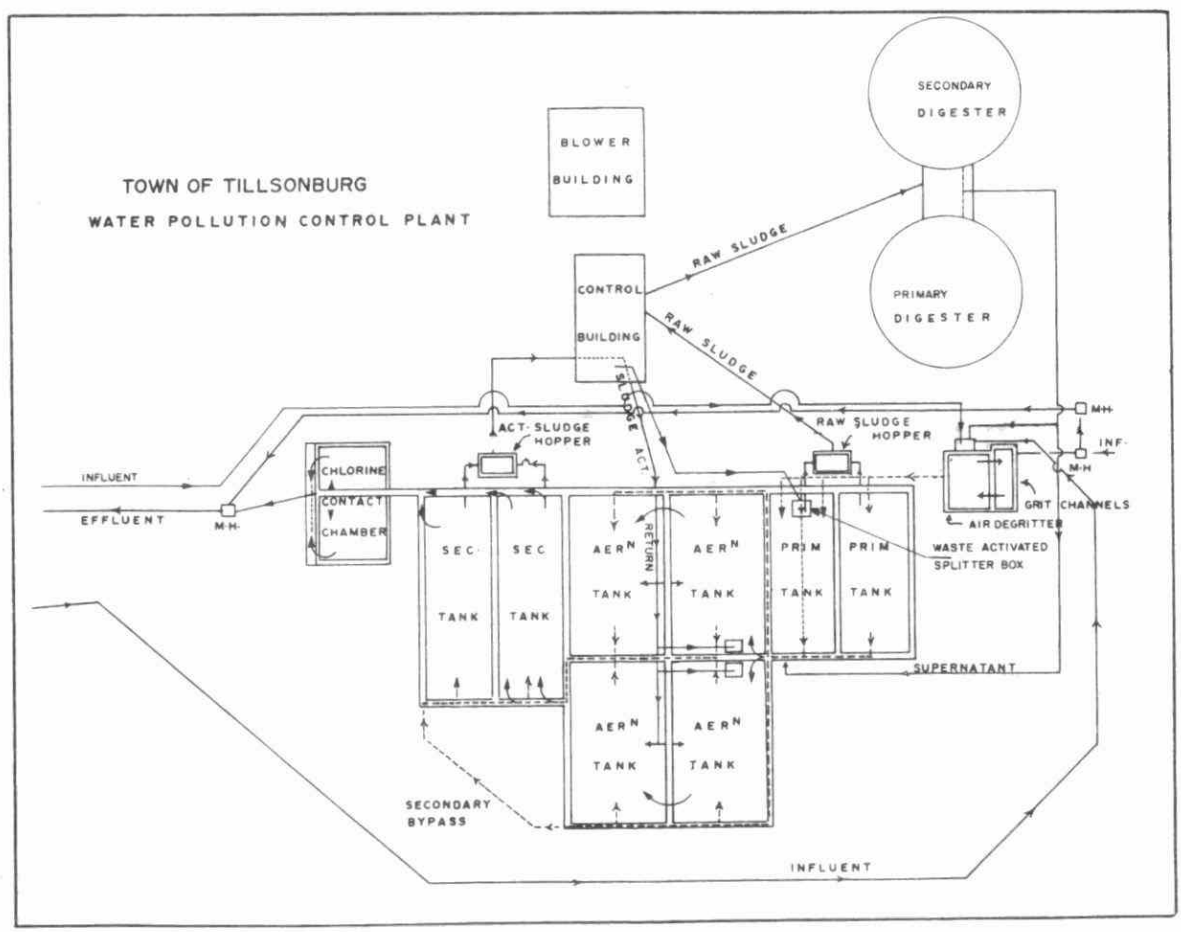
OUTFALL - to creek

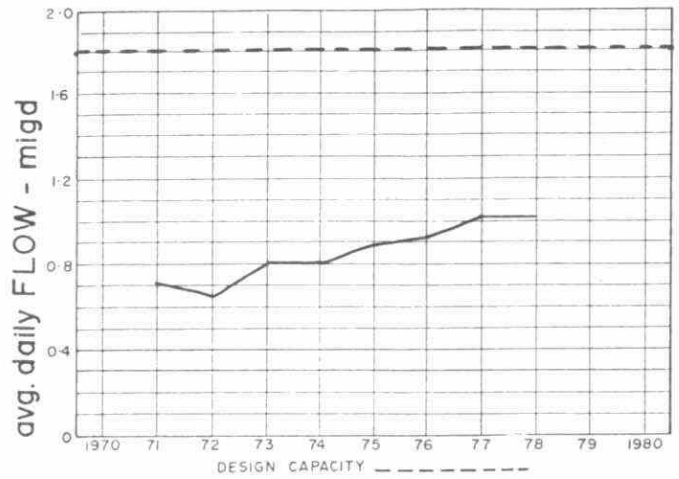
SLUDGE HANDLING:
Digestion System : Two-Stage
Primary Digester: 45' dia. x 20' swd.
Volume: 36,000 ft^3
Secondary Digester: 45' dia. x 20' swd
Volume: 36,000 ft^3

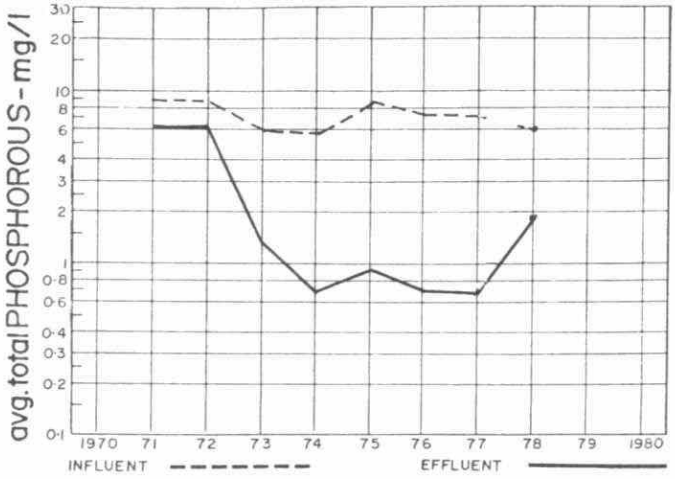
PUMPING STATION:
John Pound Street Pumping Station

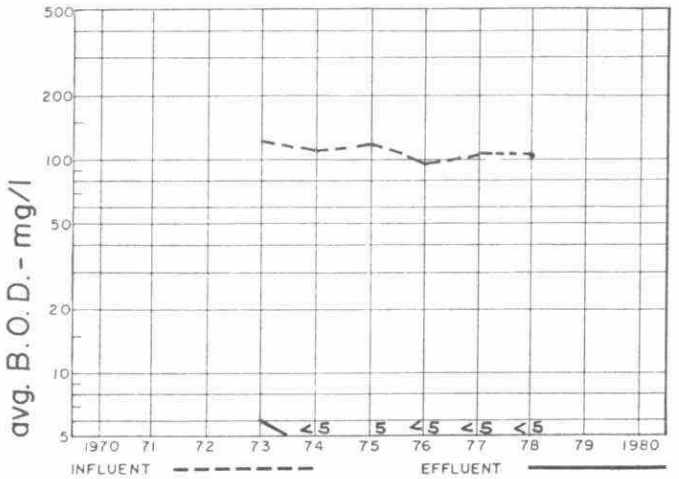
Capacity: 2.7 MGD plus 50% standby

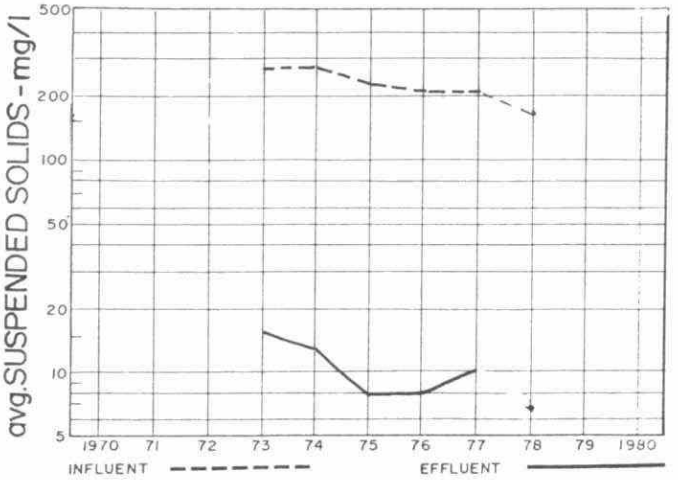
Screening and Comminution.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000757 — TILLSONBURG WPCP

MUNICIPALITY : TILLSONBURG
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 9,774

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.800 MIGD — DESIGN BOD5 : 235.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	32.990	1.060	1.250	2.750	145.0	1.4	99	47.3	157.0	1.0	99	51.4	4.2	.3	92	1.3
FEB	27.830	.990	1.200	1.650	118.0	.4	99	32.7	129.0	6.0	95	34.2	6.2	.3	95	1.6
MAR	35.270	1.140	1.730	2.850	104.0	2.8	97	35.6	190.0	7.0	96	64.5	6.2	.3	94	2.0
APR	35.495	1.183	1.428	2.675	92.0	3.2	96	31.5	143.0	7.0	95	48.2	5.2	3.0	42	.7
MAY	33.708	1.083	1.275	1.975	96.0	7.6	92	29.7	89.0	19.5	78	23.4	5.6	3.8	32	.6
JUN	29.729	.991	1.125	1.775	94.0	3.2	96	26.9	193.0	7.5	96	55.1	6.1	4.0	34	.6
JUL	27.706	.893	1.012	2.250	108.0	3.0	97	29.0	221.0	4.7	97	59.9	6.6	4.9	25	.4
AUG	27.487	.887	.998	2.075	86.0	.8	99	23.4	209.0	5.4	97	55.9	6.7	4.6	31	.5
SEP	27.626	.920	1.108	2.864	90.0	4.6	94	23.5	193.0	5.2	97	51.8	7.0	.4	94	1.8
OCT	29.804	.961	1.128	1.829	98.0	1.4	98	28.7	193.0	7.5	96	55.2	7.0	.8	88	1.8
NOV	28.950	.965	1.136	1.983	106.0	3.0	97	29.8	100.0	5.5	94	27.3	6.1	.5	91	1.6
DEC	30.802	.993	1.358	2.335	88.0	3.2	96	26.1	177.0	4.9	97	53.0	5.2	.5	90	1.4
TOTAL	367.397							364.2				579.9				14.3
AVERAGE		1.006	MAXIMUM 1.730	MAXIMUM 2.864	102.0	2.8	97		166.1	6.7	95		6.0	1.9	67	
NO. OF SAMPLES					12	12			48	42			12	12		

TUCKERSMITH (VAN ASTRA)

PROJECT: Vanastra WPCP

PROJECT NO: 2-1003-73

DESIGN FLOW: 0.31 MGD

COMMINUTOR
One

GRIT REMOVAL
none

PRIMARY SEDIMENTATION
Type: One, circular
Size: 30' i.d x 8' awd
Volume: 35,300 I.G.
Retention: 1.9 hr
Loading:
- Surface 758 I.G./ ft^2/day
- Weir 5233 I.G./ft/day

AERATION TANKS
Type: Two, rectangular
Size: each 60' x 10' x 10' awd
Volume (total): 74,800 I.G.
Retention: 4.0 hr

BLOWERS

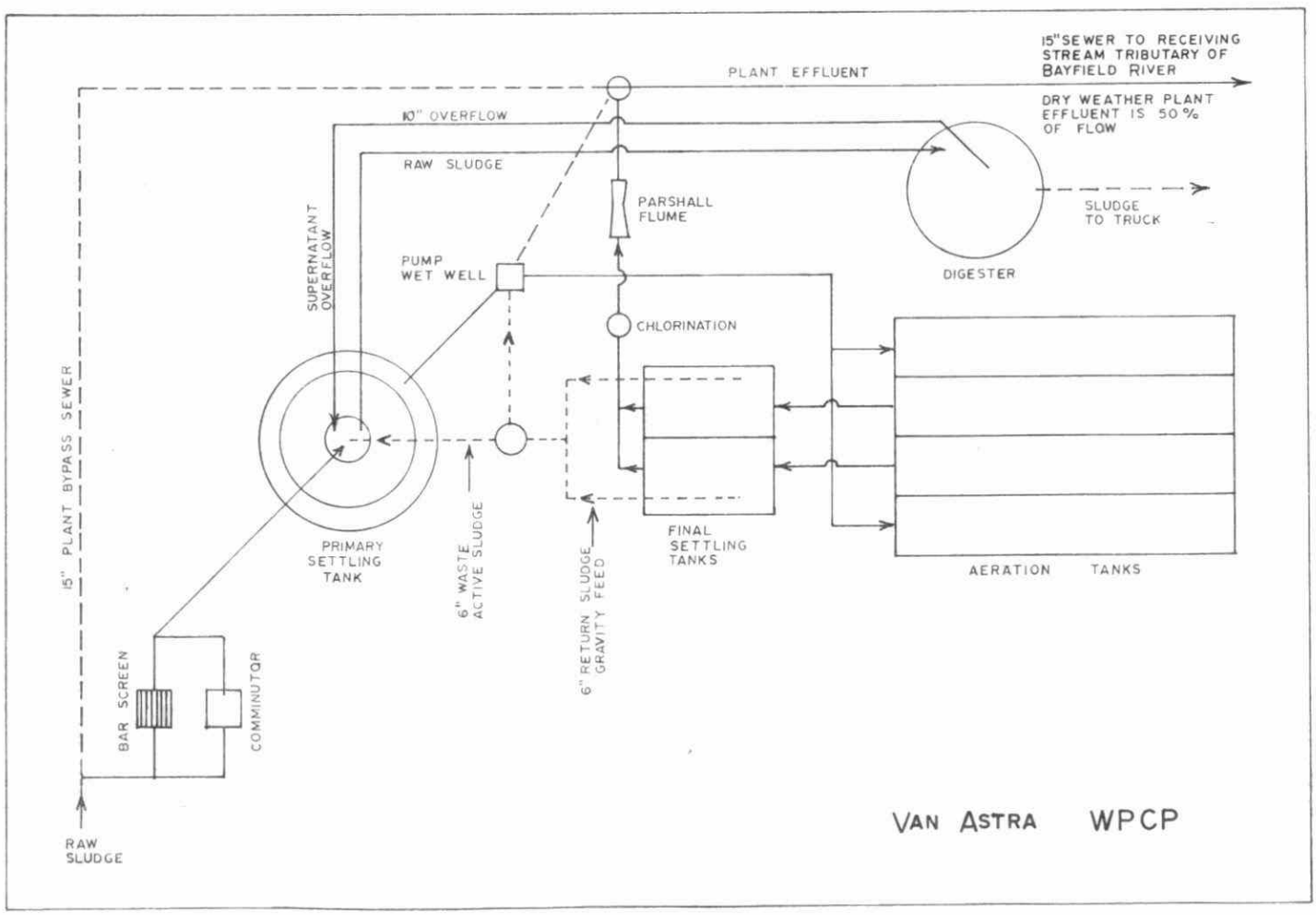
Type: Two, positive displacement
Size: One, 450 cfm

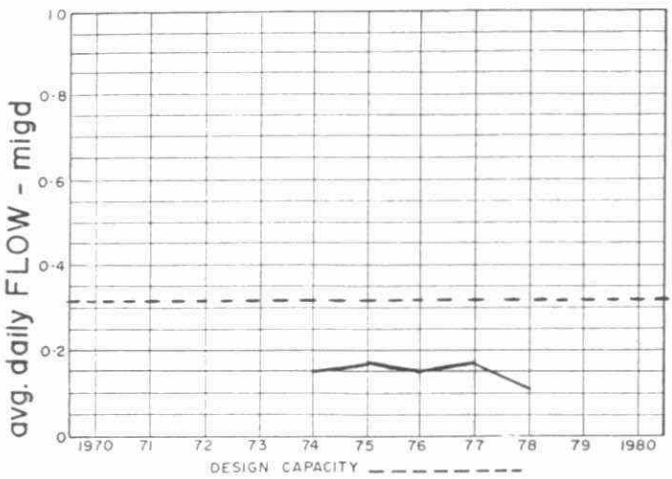
One, 400 cfm

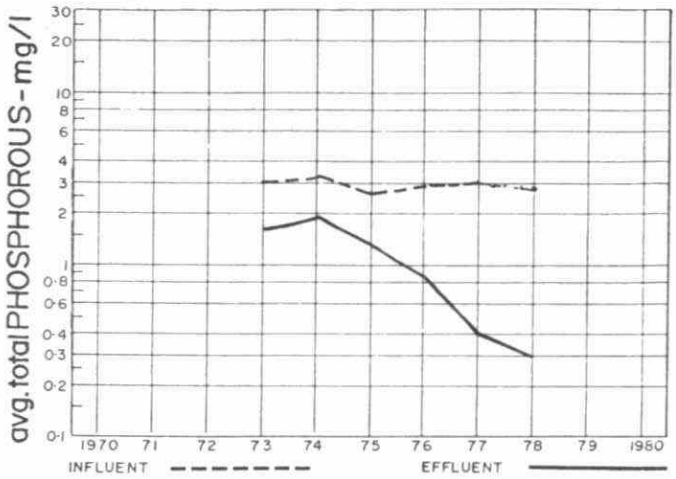
SECONDARY SEDIMENTATION
Type: Two, square
Size: 21' x 21' x 9.75' awd
Volume: (total) 53,800 I.G.
Retention: 2.9 hr

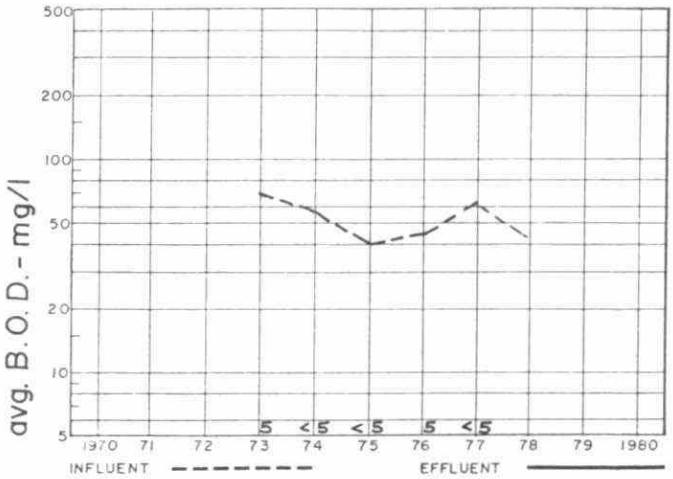
SLUDGE DIGESTION
Type: single-stage anaerobic
Size: 34' i.d. x 21' awd
Volume: 19100 ft^3

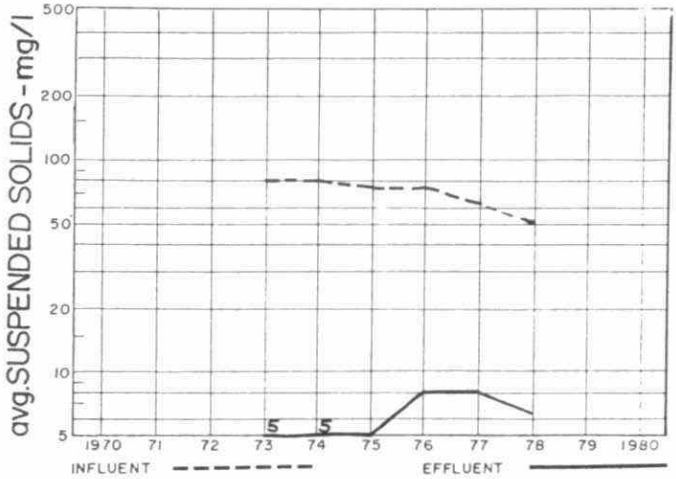
CHLORMATION
Type: gas











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER 1100003013 — VAN ASTRA W P C P

MUNICIPALITY : TUCKERSMITH (VAN ASTRA)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 4,498

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.309 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.940	.090	.170		54.0	3.0	94	1.4	88.0	7.0	92	2.3	3.2	.3	90	
FEB	2.610	.090	.130		45.0	2.0	95	1.1	55.0	7.0	87	1.2	2.9	.4	86	
MAR	6.370	.210	.620		51.0	3.0	94	3.0	83.0	5.0	93	4.9	3.0	.4	86	.1
APR	7.632	.254	.723	1.200	32.0	11.6	63	1.5	33.0	9.0	72	1.8	1.5	.3	80	
MAY	3.631	.117	.187	.290	57.0	1.9	96	2.0	39.0	6.8	82	1.1	3.9	.2	94	.1
JUN	2.268	.075	.151	.250	54.0	1.4	97	1.1	53.0	3.3	93	1.1	3.7	.2	94	
JUL	1.474	.048	.075		56.0	2.0	96	.7	72.0	5.0	93	.9	4.4	.5	88	
AUG	1.524	.049	.083	.095	20.0	1.6	92	.2	38.0	5.3	86	.4	2.3	.4	82	
SEP	4.142	.134	.229	.229	45.0	2.1	95	1.7	34.0	6.5	80	1.1	2.8	.4	85	
OCT	5.496	.177	.599	.700	31.0	1.3	95	1.6	33.0	6.3	80	1.4	3.0	.4	86	.1
NOV	2.488	.083	.199	.250	60.0	3.4	94	1.4	69.0	6.5	90	1.5	2.5	.4	84	
DEC	4.060	.131	.308	.350	12.0	3.4	71	.3	20.0	8.0	60	.4	.9	.5	44	
TOTAL	44.635							16.0				18.1				.3
AVERAGE		.122	MAXIMUM .723	MAXIMUM 1.200	43.0	3.0	92		51.4	6.3	87		2.8	.3	87	
NO. OF SAMPLES					19	19			19	19			19	19		

PROJECT Town of Wallaceburg WPCP

PROJECT NO.	1-0087-67
DESIGN POPULATION	13,500
DESIGN LOADING	1.5 IMGD
DESIGN BOD	200.0 mg/l
DESIGN SS	250.0 mg/l

COMMINUTION

No. of units - 1
Type: Barminutor

GRIT REMOVAL

No. of tanks - 1
Type: Aerated by diffusers

PRIMARY SEDIMENTATION

No. of tanks - 2
Tank dimensions: 16'x48'x14.5' each
Detention: 2.22 hours

AERATION

No. of tanks - 2
Type: aerated by diffusers
Tank dimensions: 16'x106'x13.25' each
Detention: 4.49 hours

SECONDARY SEDIMENTATION

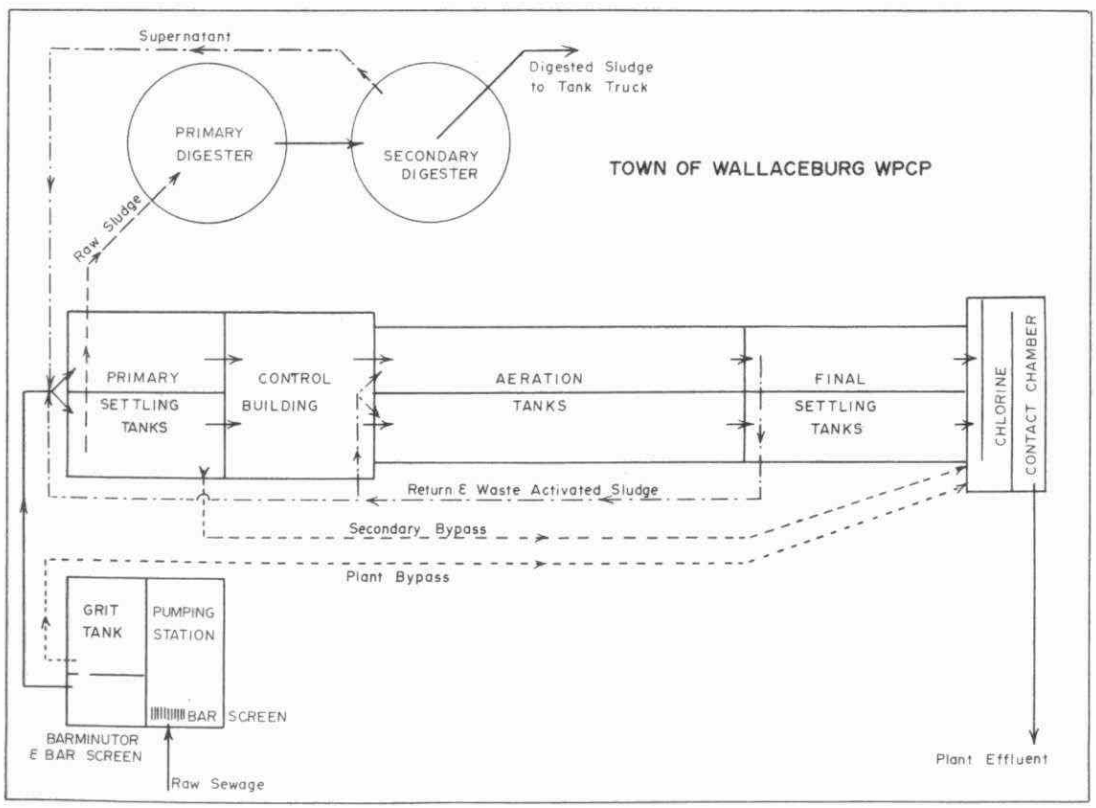
No. of tanks - 2
Tank dimensions: 72'x16'x12.5' each
Detention: 2.68 hours

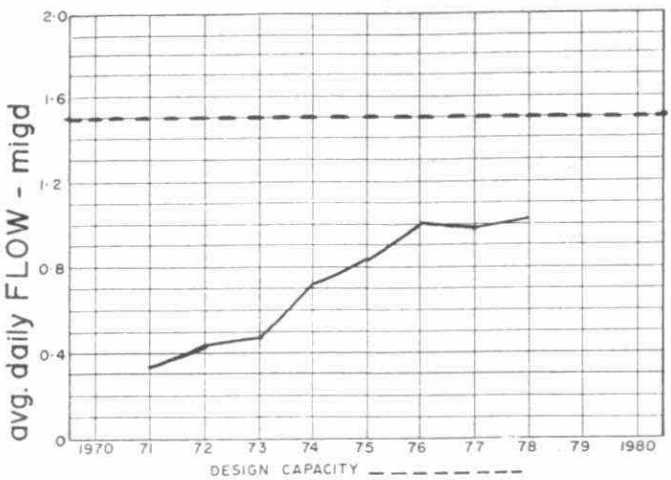
CHLORINATION

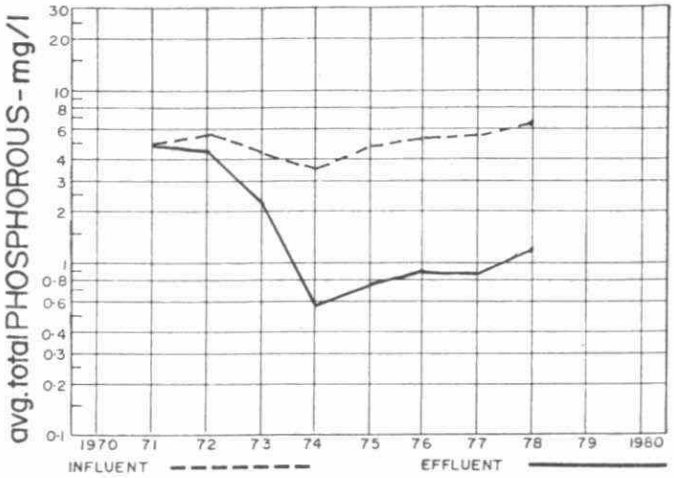
No. of tanks - 1
Detention: 21.8 min.

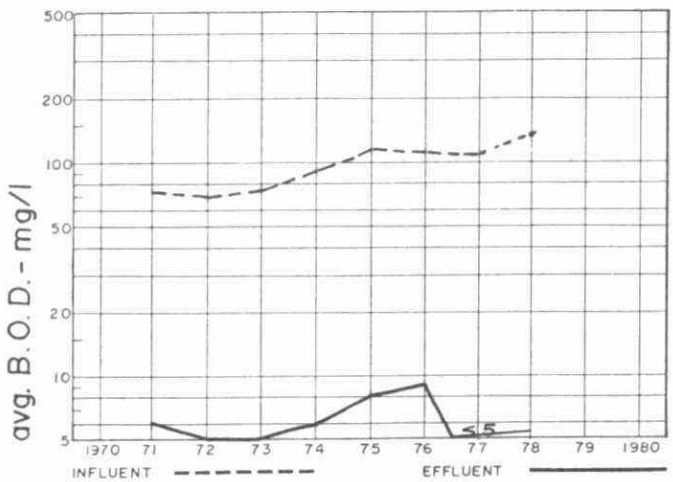
SLUDGE DIGESTION

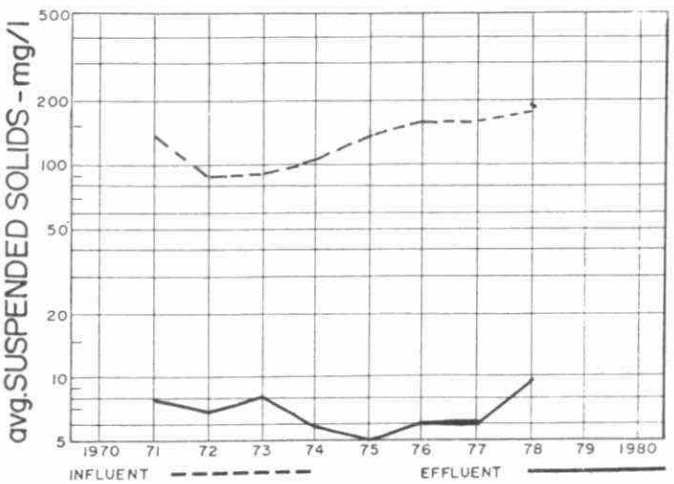
No. of tanks - 2
Tank dimensions: one @ 35' dia x 19'
one @ 35' x 18.5'
Total Detention: 21.1 days











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000784 — WALLACEBURG WPCP

MUNICIPALITY : WALLACEBURG
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 11,143

* DATA NOT AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.500 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	31.910	1.060	1.770	4.500	125.0	8.0	93	37.3	152.0	8.0	94	45.9	6.0	.9	85	1.6
FEB	27.960	1.000	1.200	3.100	122.0	6.0	95	32.4	148.0	12.0	91	38.0	6.3	1.5	76	1.3
MAR	48.470	1.560	3.700	8.000	86.0	9.0	89	37.3	198.0	31.0	84	80.9	5.8	1.6	72	2.0
APR	41.149	1.372	1.830	3.000	145.0	9.0	93	55.9	236.0	*			5.5	1.0	81	1.8
MAY	34.538	1.114	1.298	7.300	128.0	2.5	98	43.3	160.0	5.8	96	53.2	5.5	.9	83	1.5
JUN	28.218	.941	1.139	5.500	149.0	3.0	97	41.1	192.0	4.0	97	53.0	6.0	.5	91	1.5
JUL	25.016	.807	.964	2.900	138.0	2.3	98	33.9	164.0	3.5	97	40.1	*	.9		
AUG	23.425	.756	.929	2.900	123.0	4.5	96	27.7	221.0	8.0	96	49.8	4.6	.6	86	.9
SEP	28.000	.933	1.000	2.900	140.0	4.3	96	37.9	255.0	8.5	96	69.0	6.6	1.4	78	1.4
OCT	28.825	.930			165.0	4.0	97	46.4	203.0	4.9	97	57.1	7.5	3.3	56	1.2
NOV	26.845	.895	1.160	2.500	152.0	7.3	95	38.8	189.0	7.5	96	48.7	7.3	1.5	79	1.5
DEC	28.598	.923	1.360	2.800	150.0	5.8	96	41.2	177.0	6.0	96	48.9	6.5	1.0	84	1.5
TOTAL	372.954							473.2				584.6				16.2
AVERAGE		1.024	MAXIMUM 3.700	MAXIMUM 8.000	135.2	5.4	95		191.2	9.0	95		6.1	1.2	79	
NO. OF SAMPLES					55	54			258	239			15	24		

Ministry of the Environment
Ontario

West Central Region

(2)

REGIONAL OFFICE

STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES

Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

SUB-OFFICE

Simcoe
645 Norfolk St. N.
519-426-1940

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

BRANTFORD

PROJECT City of Brantford WPCP

PROJECT NO.	2-0011-58
TREATMENT	Activated Sludge
DESIGN FLOW	12.5 mgd
DESIGN POPULATION	65,000
BOD - Raw Sewage	170 mg/l
- Removal	90%
SS - Raw Sewage	175 mg/l
- Removal	90%

PRIMARY TREATMENT

Screening

Type: Coarse bar screens
Size: Two 5 in. spaces

Comminution

Type: Infilco Rotograter
Size: Two No. 43 (8 mgd ea)

Raw Sewage Pumps

Type: Fairbanks-Morse
Size: Four 3840 gpm ea @ 45' tdh

Grit Removal

Type: Dorr Detritor, Type WA
Size: Two 20' x 20' x 1'-3"
Flow Velocity: 1 fps
Retention: 0.725 min

Primary Sedimentation

Type: Eimco, Type C
Size: Four 70' dia x 10' swd
Retention: 2 hours
Loading: Surface, 812 gal/ft^2/day
Weir, 14,200 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Two triple-pass tanks ACM mech aerators in first pass; Diffused air in 2nd and 3rd passes.

Size of pass, 200' x 30' x 15'
Retention: 7.5 hr

Air Supply

Type: Sutorbilt blowers
Size: Three 4300 cfm

Secondary Sedimentation

Type: Eimco, Type C
Size: Four 70' dia x 10' swd
Retention: 2 hr
Loading: Surface, 812 gal/ft^2/day
Weir, 14,200 gal/ft/day

CHLORINATION

Chlorinator

Type: Fischer & Porter Manual adjustment - liquid chlorine evaporator

Chlorine Contact Chamber

Size: 51' x 18' x 7'
Retention: 5 min

OUTFALL

Grand River

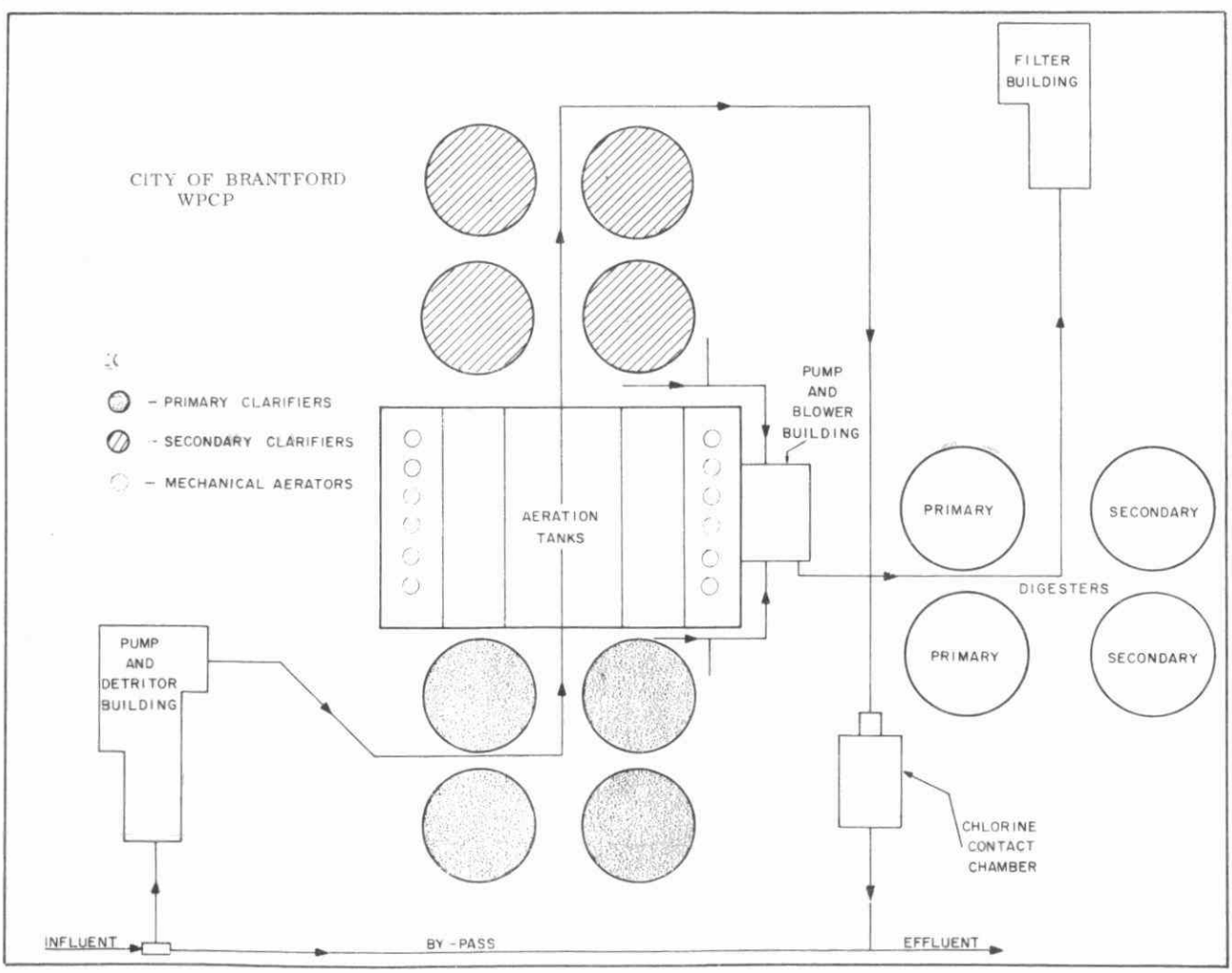
SLUDGE HANDLING

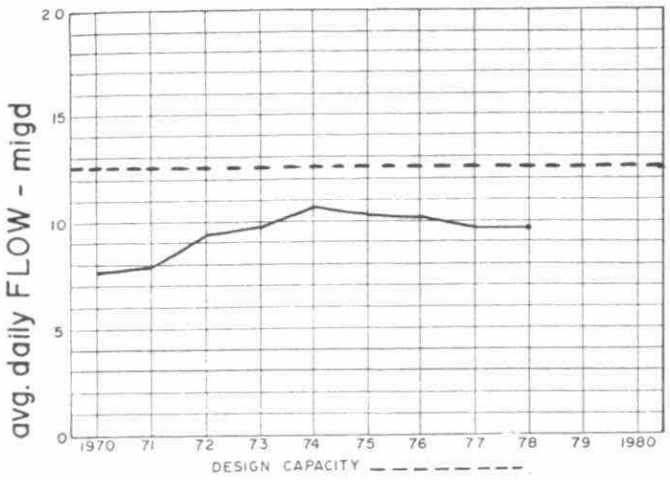
Digestion System

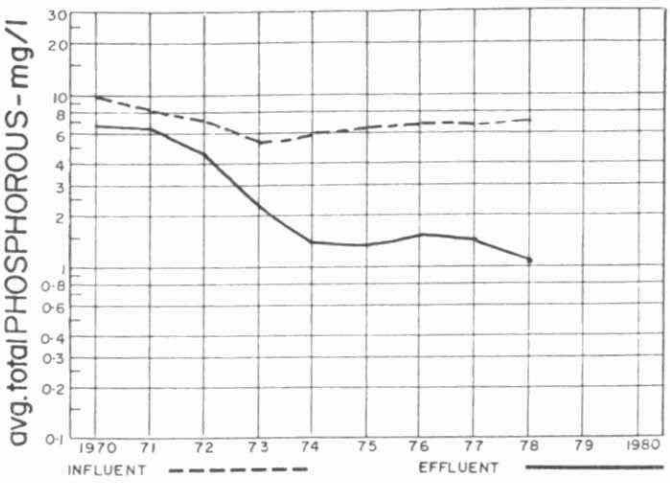
Type: Two-stage
Primary: Two 55' dia tanks with two D-O-L mixers each
Volume 49,300 cu ft or 300,000 gal (each tank)
Loading 6.1 lb/ft^3/mo
Secondary: Two 70' dia tanks with Dorr floating covers
Volume 97,200 cu ft or 600,000 gal (each tank)
Total Loading: 2.0 lb/ft^3/mo

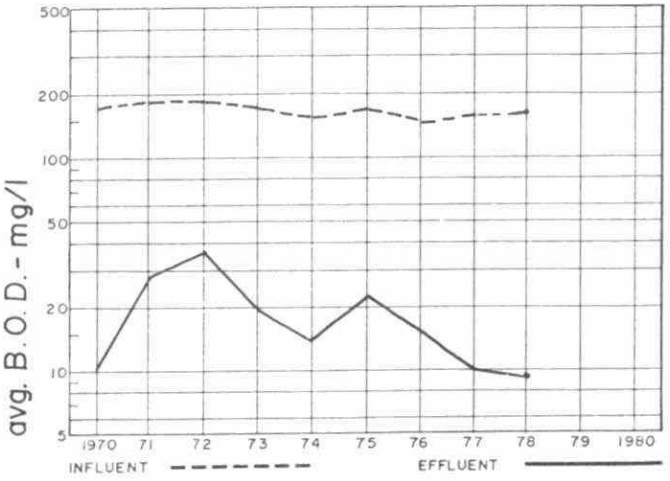
Vacuum Filter

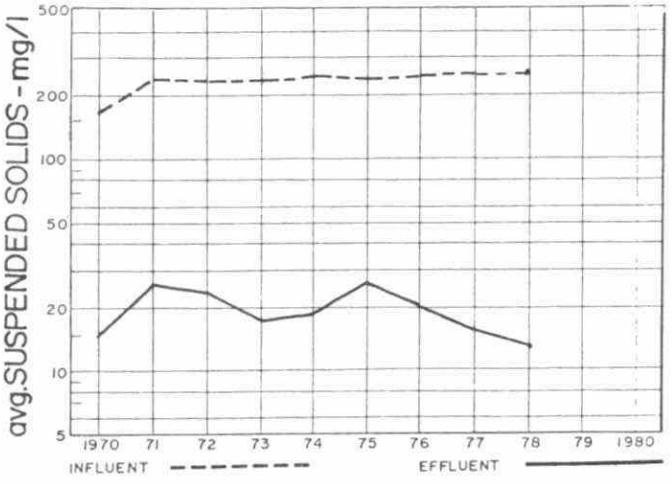
Type: Komline-Sanderson coil filters
Size: Two 350 sq ft filters











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000043 BRANTFORD WPCP

MUNICIPALITY : BRANTFORD
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

CURRENT POPULATION : 69,091

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 12.500 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 175.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	367.600	11.900	13.700	16.500	129.0	8.0	93	444.7	201.0	26.0	87	643.3	5.5	1.5	72	14.7
FEB	287.600	10.300	14.800	15.000	145.0	7.0	95	396.8	236.0	16.0	93	632.7	8.7	1.4	83	20.9
MAR	340.100	11.000	14.100		157.0	8.0	94	506.7	228.0	16.0	92	721.0	7.7	.9	88	23.1
APR	379.081	12.636	14.115	16.500	150.0	10.7	92	528.0	210.0	18.6	91	725.5	7.1	1.1	84	22.7
MAY	351.844	11.350	12.696	16.500	157.0	11.3	92	512.6	223.0	14.4	93	733.9	7.1	1.0	85	21.4
JUN	310.000	10.333	11.861	16.300	138.0	7.7	94	403.9	286.0	10.9	96	852.8	7.7	1.4	81	19.5
JUL	283.071	9.131	10.810	16.500	123.0	7.0	94	328.3	238.0	7.3	96	653.0	9.5	1.7	82	22.0
AUG	247.172	7.973	9.652	13.500	132.0	4.4	96	315.3	218.0	7.6	96	520.0	6.8	1.3	80	13.5
SEP	241.818	8.061	10.780	16.500	147.0	7.7	94	336.8	242.0	9.9	95	561.2	7.0	1.2	82	14.0
OCT	242.230	7.814	9.344	13.900	189.0	16.2	91	418.5	247.0	18.9	92	552.5	6.5	1.1	83	13.0
NOV	243.280	8.109	9.070		225.0	16.6	92	506.9	262.0	11.0	95	610.6	7.2	.9	87	15.3
DEC	253.805	8.187	9.400	15.800	182.0	10.9	94	434.2	242.0	8.8	96	591.8	5.7	.6	89	12.9
TOTAL	3547.601							5132.7				7798.3				213.0
AVERAGE		9.733	MAXIMUM 14.800	MAXIMUM 16.500	156.1	9.6	93		236.0	13.7	94		7.2	1.1	83	
NO. OF SAMPLES					88	92			226	240			90	234		

CAMBRIDGE (GALT)

PROJECT	City of Cambridge (Galt) WPCP
PROJECT NO.	1-0099-67
TREATMENT	Activated Sludge
DESIGN FLOW	8.5 mgd
DESIGN POPULATION	34,000
BOD - Raw Sewage	250 mg/l
- Removal	90%
SS - Raw Sewage	250 mg/l
- Removal	90%

PRIMARY TREATMENT

Comminution

Type: C.P. Barminutor
Size: One Model C (36")

Raw Sewage Pumps

Type: Babcock-Wilcox
Size: Three 3500 gpm @ 30' tdh

Grit Removal

Type: Eimco Detritor
Size: One 18' x 18' x 2' deep (4,000 gal)
Retention: 1.15 min

Primary Sedimentation

Type: (a) Dorr (old cl.)
(b) Eimco (new cl.)
Size: Two 60' dia x 9' swd 50,600 cu ft or 315,000 gal)
Retention: 1.5 hours
Loading: Surface, 884 gal/ft^2/day
Weir, 13,250 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Mechanical aeration Single pass (5-cell)
Size: Four 150' x 30' x 13.7' (234,000 cu ft or 1.46 mil gal)
Retention: 7.0 hours

Aerators

- Twenty Ames-Crosta

Secondary Sedimentation

Type: Eimco
Size: Two 75' dia x 10' swd (88,400 cu ft or 550,000 gal)
Retention: 2.64 hours
Loading: Surface, 566 gal/ft^2/day
Weir, 10,600 gal/ft/day

CHLORINATION

- One F & P Automatic

Chlorine Contact Chamber

Size: One 49.25' x 21.5' x 7.25' (46,000 gal)
Retention: 13.25 min

OUTFALL

- to Grand River

SLUDGE HANDLING

Digestion System

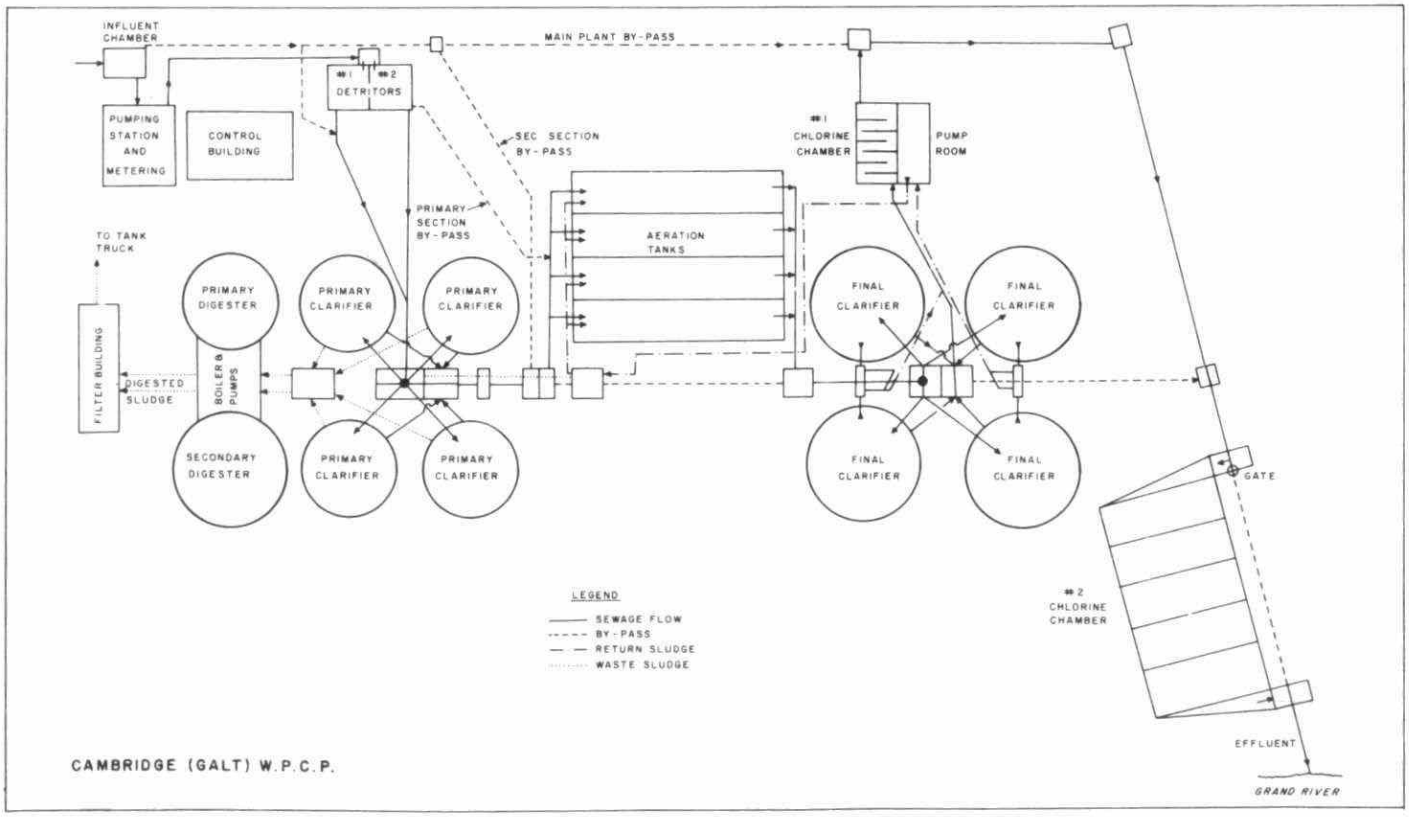
Type: Two-stage

Primary --
Type: Eimco draft tube mixers (2) on concrete roof
Size: One 50' dia x 20' swd (30,300 cu ft or 189,000 gal)

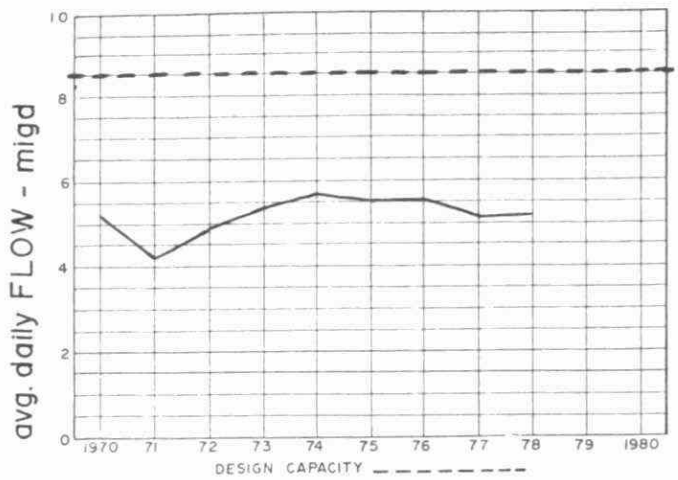
Secondary --
Size: One 70' dia x 20' swd (77,000 cu ft or 480,000 gal)

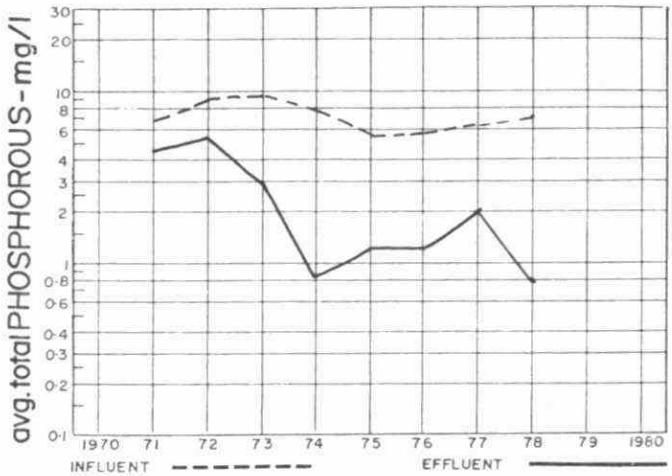
Vacuum Filter

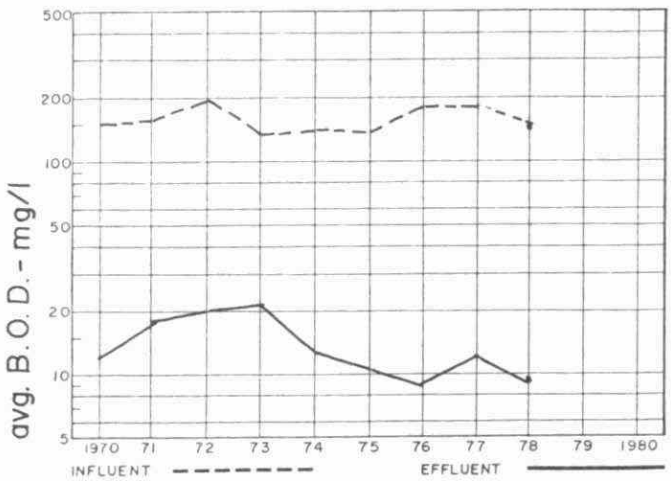
Type: Eimco (cloth)
Size: One, 380 sq ft

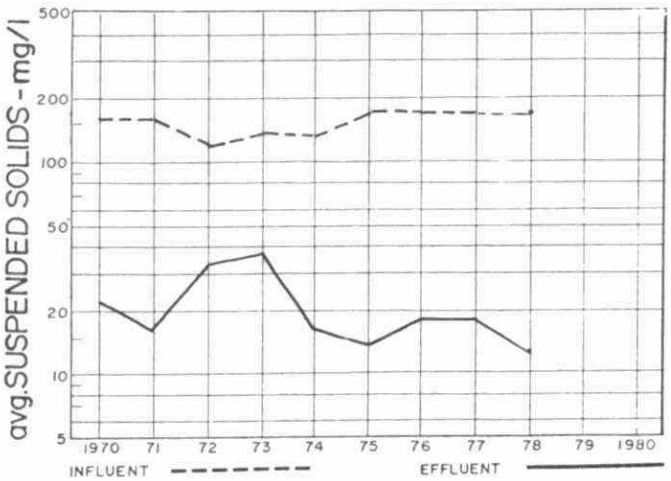


CAMBRIDGE (GALT) W.P.C.P.









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000276 GALT WPCP

MUNICIPALITY : CAMBRIDGE (GALT)
REGION : 02 WEST CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 73,314

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 8.500 MIGD DESIGN BOD5 : 250.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	162.410	5.240	6.330	9.700	138.0	11.0	92	206.2	160.0	13.0	91	238.7	5.5	1.2	78	6.9
FEB	137.290	4.900	5.340	7.900	193.0	12.0	93	248.4	165.0	13.0	92	208.6	8.5	1.1	87	10.1
MAR	169.700	5.474	5.200		149.0	9.0	93	237.5	159.0	11.0	93	251.1	7.6	.7	90	11.7
APR	155.756	5.192	6.898	8.500	125.0	8.0	93	182.2	143.0	13.0	90	202.4	6.5	.6	90	9.1
MAY	155.600	5.019			135.0	13.0	90	189.8	153.0	10.0	93	222.5	6.5	.7	89	9.0
JUN	164.200	5.473			140.0	14.0	90	206.8	168.0	14.0	91	252.8	7.8	.8	89	11.4
JUL	133.700	4.312			140.0	8.6	93	175.6	230.0	11.0	95	292.8	9.7	.7	92	12.0
AUG	162.500	5.242			152.0	13.4	91	225.2	204.0	15.6	92	306.1	6.2	.8	87	8.7
SEP	170.500	5.683			80.0	5.0	93	127.8	148.0	21.0	85	216.5	6.1	.9	85	8.8
OCT	174.500	5.629			160.0	5.0	96	270.4	176.0	12.0	93	286.1	6.2	.7	88	9.5
NOV	170.100	5.670			140.0	7.0	95	226.2	146.0	12.0	91	227.9	7.2	.7	90	11.0
DEC	180.700	5.829			169.0	7.3	95	292.1	172.0	10.7	93	291.4	6.8	1.0	85	10.4
TOTAL	1936.956							2588.2				2996.9				118.6
AVERAGE		5.305	MAXIMUM 6.898	MAXIMUM 9.700	143.4	9.4	93		168.6	13.0	92		7.0	.8	88	
NO. OF SAMPLES					79	79			161	321			68	161		

CAMBRIDGE (PRESTON)

PROJECT City of Cambridge (Preston) WPCP
PROJECT NO. 1-0134-67

TREATMENT Activated Sludge

DESIGN FLOW 3.71 mgd

BOD - Raw Sewage 470 mg/l

SS - Raw Sewage 470 mg/l

PRIMARY TREATMENT

Grit Removal

Type: Dorr detritor
Size: One 20' x 20' x 1½' (3,740 gal)
Retention: 2.1 min

Comminution

Type: Barminutor
Size: Model C (36")

Primary Sedimentation

Type: Dorr
Size: Four 50' dia x 10' swd (492,000 gal)
Retention: 3.2 hr
Loading: Surface, 460 gal/ft^2/day
Weir, 5730 gal/ft/day

Sewage Lift Pumps

Type: Worthington
Size: Two 2580 gpm
One 1800 gpm

SECONDARY TREATMENT

Aeration Tanks

Type: Mechanical; single-pass
Size: Two 150' x 30' x 13' (731,000 gal)
Retention: 4.7 hr

Aerators

- Ten Ames-Crosta X 25 HP

Secondary Sedimentation

Type: Dorr
Size: Four 50' dia x 10' swd (492,000 gal)
Retention: 3.2 hr
Loading: Surface, 460 gal/ft^2/day
Weir, 5730 gal/ft/day

CHLORINATION

Type: F & P
Size: One 400 lb/day

Chlorine Contact Chamber

Size: One 30' x 15' x 6' 8" (18,700 gal)
Size: one 50' x 30' x 6'8" (58,600 gal)
Retention: (both) 30 min.

OUTFALL

- to Grand River

SLUDGE HANDLING

Holding Tank

Size: One 20' x 20' x 11' (4,400 cu ft or 27,400 gal)

Digestion System

- Two-Stage

Primary Digester

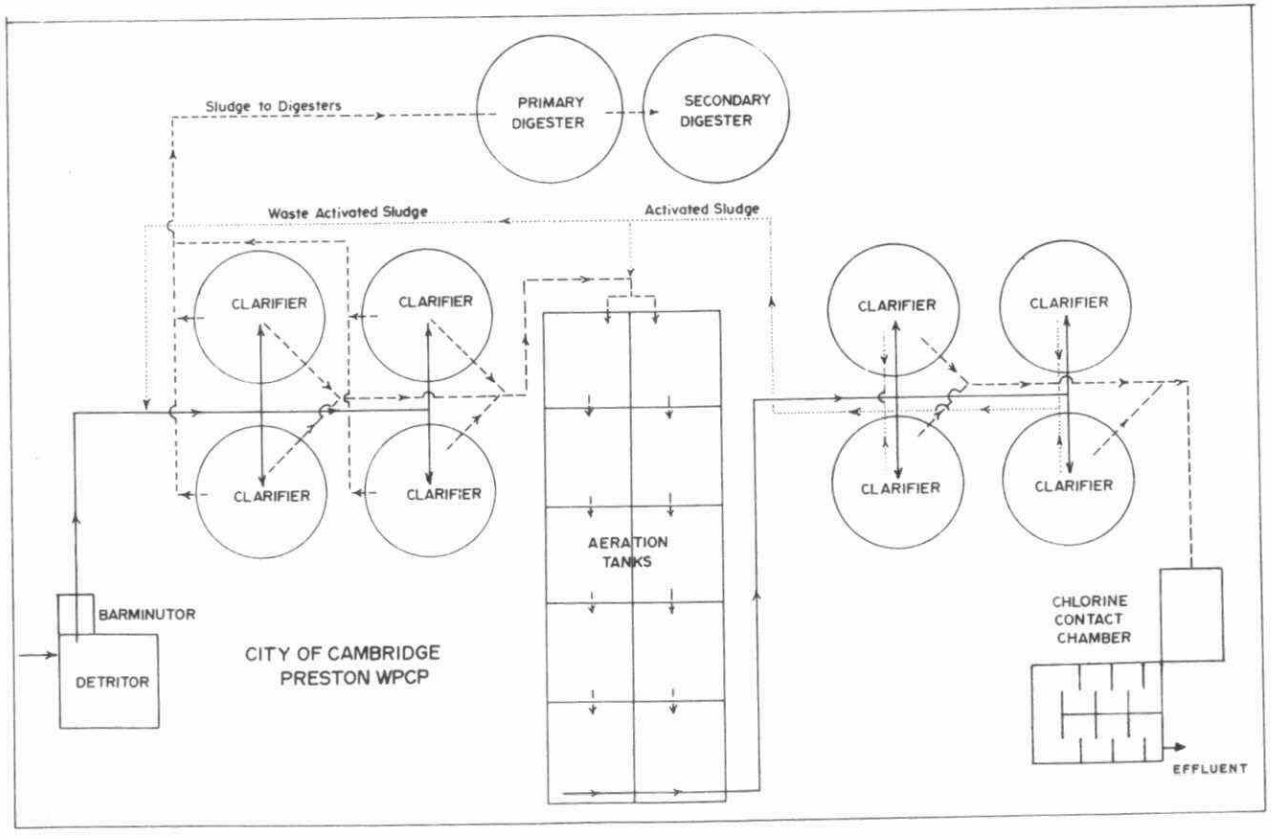
Size: One 50' dia x 38' awd (79,800 ft^3)

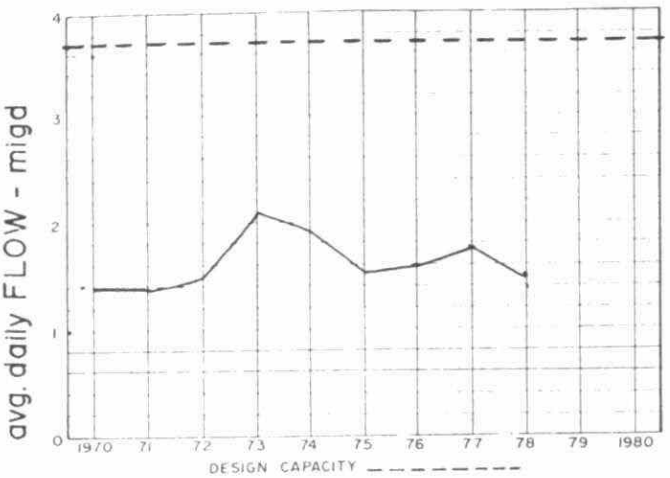
Secondary Digester

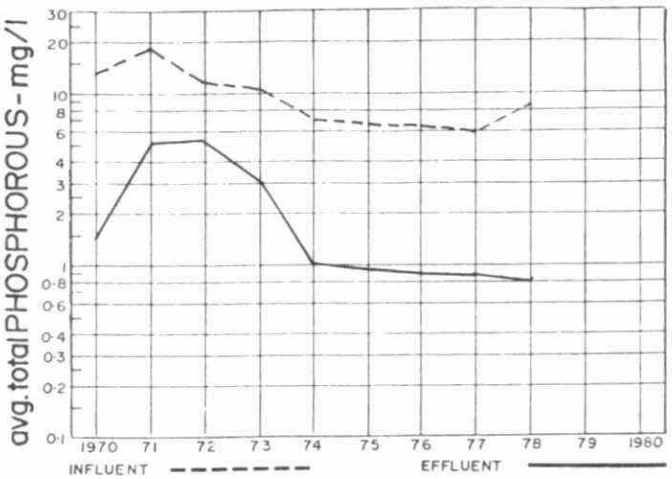
Size: One 50' dia x 38' awd (79,800 ft^3)

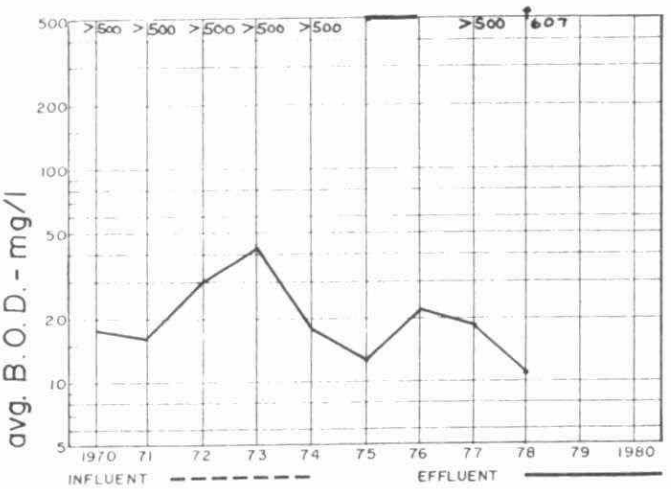
Sludge Recirculating Pump

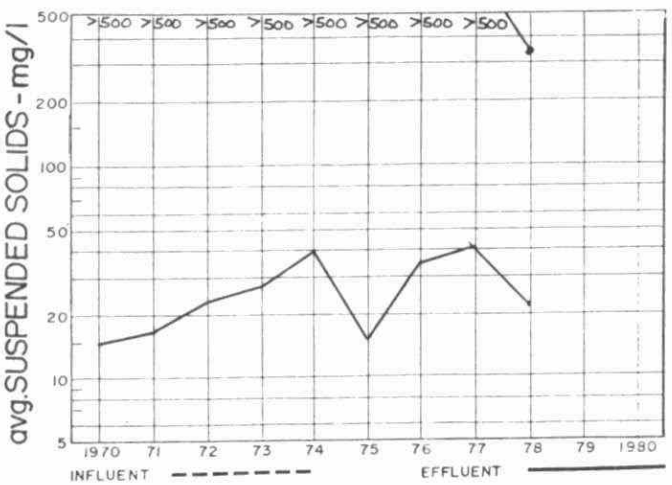
Type: Carter Duplex Mod 805
Size: 200 gpm at 40' TDH











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000622 — PRESTON WPCP

MUNICIPALITY : CAMBRIDGE (PRESTON)
REGION : 02 WEST CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 73,314

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 3.710 MIGD — DESIGN BOD5 : 470.0 MG/L — DESIGN SUSP.SOLIDS : 470.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN 78-DEC 78																
JAN	55.180	1.780	2.080	4.560	821.0	12.0	98	446.4	506.0	17.0	96	269.8	6.1	.9	85	2.8
FEB	49.860	1.780	2.250	4.560	809.0	8.0	99	399.3	545.0	20.0	96	261.7	9.0	.8	91	4.0
MAR	58.200	1.880	2.320	5.130	565.0	7.0	98	324.7	428.0	18.0	95	238.6	8.7	.9	89	4.5
APR	57.959	1.932	2.546	5.400	522.0	7.0	98	298.4	415.0	13.0	96	232.9	11.1	.7	93	6.0
MAY	53.888	1.738	2.094	5.280	594.0	18.0	96	310.3	303.0	27.0	91	148.7	8.9	1.4	84	4.0
JUN	49.077	1.636	1.871	4.920	601.0	20.0	96	285.1	407.0	61.0	85	169.8	9.4	1.4	85	3.9
JUL	45.977	1.483	1.811	4.950	641.0	8.6	98	290.7	382.0	18.0	95	167.3	8.1	.6	92	3.4
AUG	46.404	1.497	1.802	4.380	425.0	8.0	98	193.5	262.0	24.0	90	110.4	6.0	.6	90	2.5
SEP	48.613	1.620	2.569	4.890	404.0	11.0	97	191.0	248.0	36.0	85	103.0	5.8	.7	87	2.4
OCT	49.004	1.581	1.894	4.200	620.0	9.0	98	299.4	476.0	21.0	95	222.9	8.7	.5	94	4.0
NOV	45.924	1.531	1.895	4.200	590.0	12.0	97	265.4	373.0	18.0	95	163.0	7.7	.8	89	3.1
DEC	48.925	1.578	1.977	4.380	693.0	11.0	98	333.6	404.0	20.0	95	187.8	8.6	1.1	87	3.6
TOTAL	609.011							3637.8				2275.9				44.2
AVERAGE		1.670	MAXIMUM 2.569	MAXIMUM 5.400	607.0	10.9	98		395.7	24.4	93		8.1	.8	89	
NO. OF SAMPLES					62	153			327	244			62	156		

DELHI

PROJECT: Haldimand-Norfolk
(Delhi Twp)
Delhi WPCP

PROJECT NO: 2-1007-75

TREATMENT: Conventional
Activated Sludge

DESIGN FLOW: 0.7 MIGD

BOD - Raw Sewage - 170 mg/l

SS Raw Sewage - 190 mg/l

PRIMARY TREATMENT

GRIT CHANNELS

Size: Two, each 25.25' x 1.7' x 2'
Volume (each) 536 IG
Retention (one): 1.1 min

COMMINUTORS

Type: Chicago Pumps
Size: 10-inch

PRIMARY SETTLING TANK

Type: One, rectangular
Size: 14' x 54' x 12' awd
Volume: 56,600 IG
Retention: 1.9 hr

RAW SLUDGE PUMPS

Type: One, Chicago Pumps
Size: 75 IGPM

SECONDARY TREATMENT

AERATION TANKS

Type: Two, rectangular
Size: each 50' x 21.8' x 16.5' awd
Volume: (total) 224,000 IG
Retention: 7.7 hr

AERATORS

Type: Four, mechanical

SECONDARY SETTLING TANKS

Type: One, circular
Size: 46' i.d. x 6' awd
Volume: 62,200 IG
Retention: 3.2 hr

Type: One, rectangular
Size: 43' x 15' x 7.75' awd
Volume: 31,200 IG
Retention: 3.1 hr

RETURN SLUDGE PUMPS

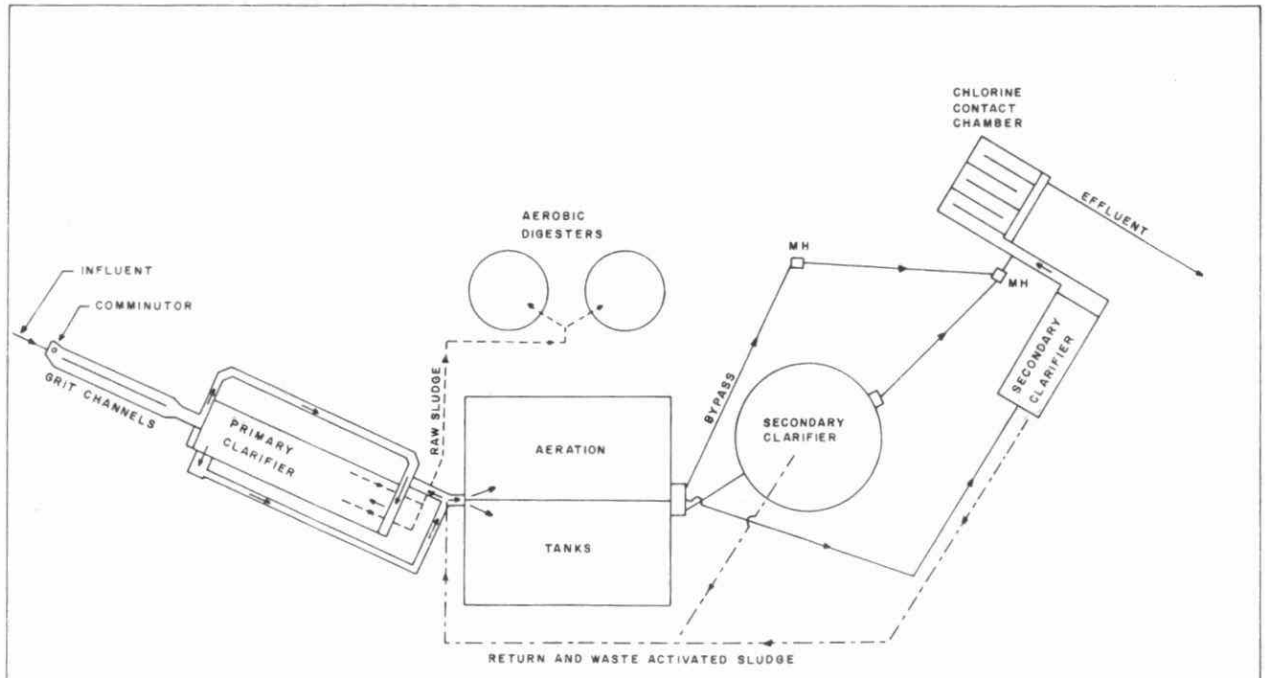
Type: Three, Hayward
Size: 150 IGPM max

AEROBIC DIGESTERS

Type: Two, circular
Size: (each) 13.6' id x 17' awd
Volume: (each) 2680 ft^3

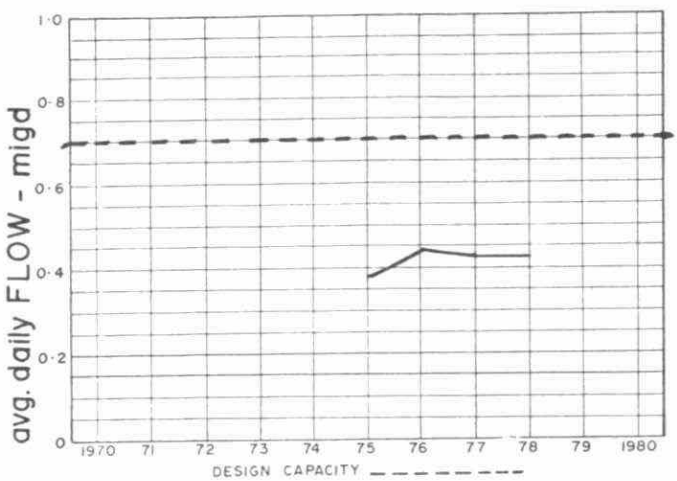
CHLORINE CONTACT TANK

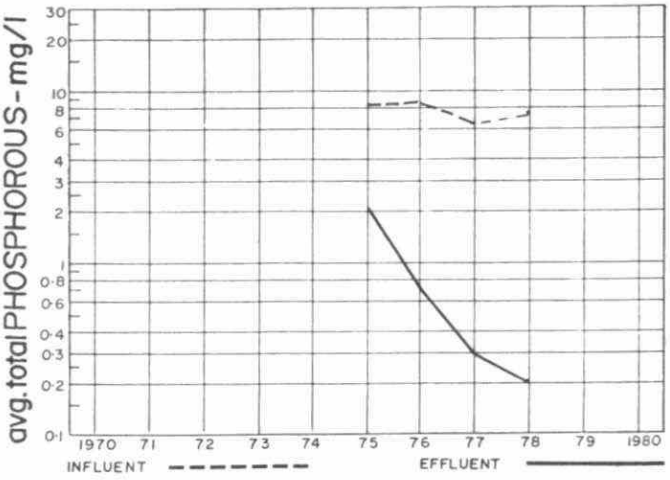
Type: One, rectangular 6-pass
Size: 26' x 19' x 6' awd
Volume: 18,500 IG
Retention: 38 min

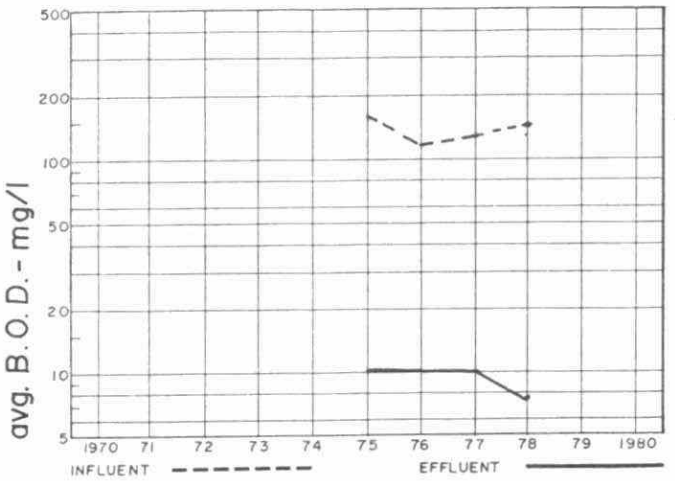


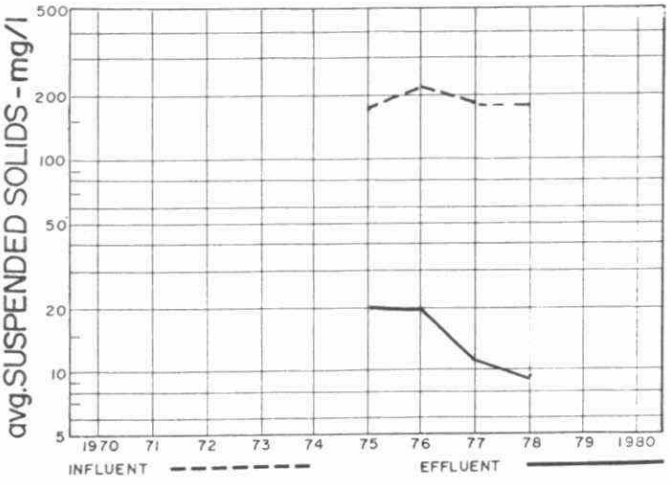
HALDIMAND - NORFOLK, DELHI TWP (DELHI)

FEB/76









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120001425 DELHI WPCP

MUNICIPALITY : DELHI
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

* NO DATA AVAILABLE

CURRENT POPULATION : 14,931

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.700 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 190.0 MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	10.940	.353	.457	.650	155.0	6.5	95	16.2	163.0	11.8	92	16.5	8.0	.3	95	.8
FEB	9.630	.344	.420	.900	132.0	12.9	90	11.4	170.0	12.6	92	15.1	6.6	.3	95	.6
MAR	11.846	.382	.497	1.200	160.0	5.5	96	18.3	201.0	11.5	94	22.4	8.8	.2	97	1.0
APR	13.407	.447	.554	1.000	167.0	5.0	97	21.7	173.0	7.0	95	22.2	8.8	.2	97	1.1
MAY	11.735	.379	.575	1.200	125.0	11.0	91	13.3	145.0	7.3	94	16.1	8.2	.2	97	.9
JUN	13.707	.457	.640	.920	135.0	3.2	97	18.0	201.0	9.8	95	26.2	5.5	.1	98	.7
JUL	15.480	.499	.626	1.150	175.0	5.2	97	26.2	282.0	9.4	96	42.1	12.2	.3	97	1.8
AUG	14.421	.465	.608	1.400	*	*			182.0	10.0	94	24.8	*	*		
SEP	14.017	.467	.564	1.000	130.0	24.0	81	14.8	204.0	10.0	95	27.1	5.0	.2	96	.6
OCT	16.775	.542	.613	1.000	120.0	3.5	97	19.5	167.0	7.2	95	26.8	6.1	.3	95	.9
NOV	16.086	.536	.636	1.000	130.0	.6	99	20.8	158.0	5.3	96	24.5	6.9	.1	98	1.0
DEC	16.716	.539	.712	1.300	125.0	8.0	93	19.5	199.0	7.3	96	32.0	7.1	.2	97	1.1
TOTAL	164.760							199.7				295.8				10.5
AVERAGE		.451	MAXIMUM .712	MAXIMUM 1.400	141.2	7.7	94		187.0	9.1	95		7.5	.2	97	
NO. OF SAMPLES					24	23			112	113			24	30		

DUNNVILLE

PROJECT: Town of Dunnville WPCP

PROJECT NO. 2-1010-75

TREATMENT: Modified Conventional Activated Sludge

DESIGN FLOW: 1.7 MIGD

BOD - Raw Sewage 180 mg/l

MAIN P.S.
Pumps: Three, each 2800 gpm

AERATED GRIT TANK
Size: 16.5'x13.5'x10' awd
Volume: 13,900 I.G.
Retention: 11 min

AERATION TANKS
Type: Two,
Size: each tank 35'x25'x14.75'
Volume(total): 322,000 I.G.
Retention: 4.5 hr
Blowers: Two, each 4850 cfm
Aerators: Dorr-Inka grids

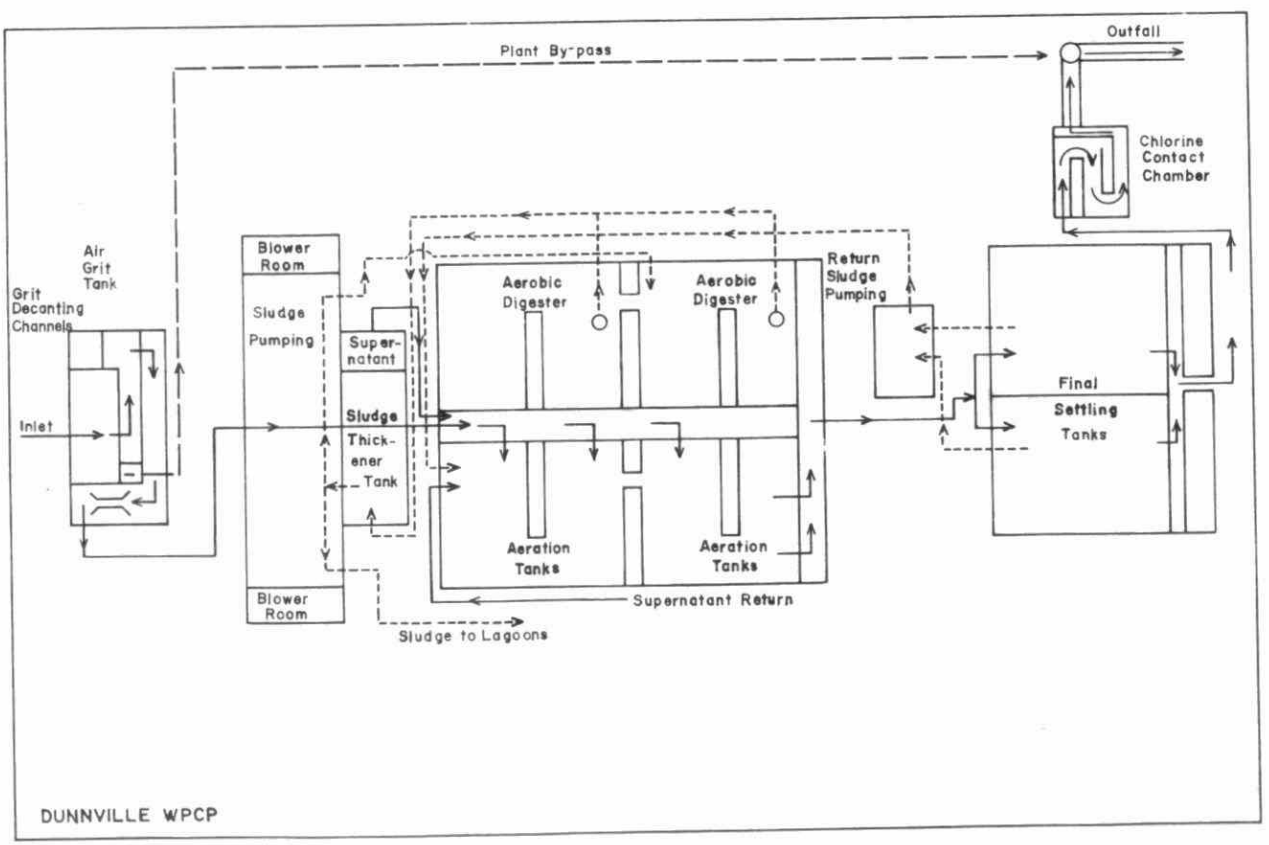
FINAL SETTLING
Size: Two, each 72'x18'x12'
Volume: 194,000 I.G.
Retention: 2.7 hr

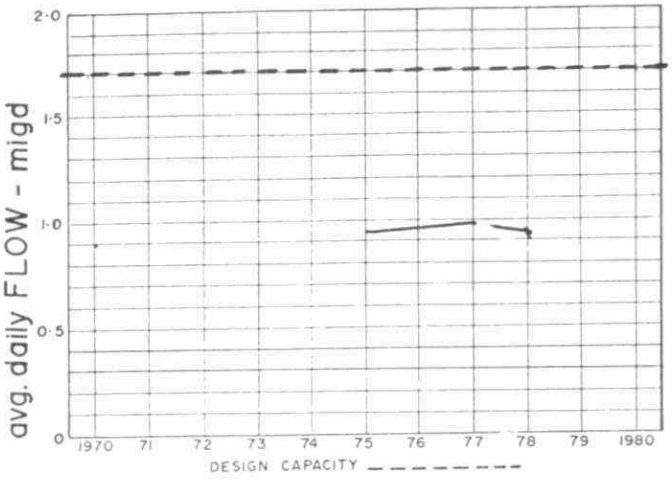
CHLORINATION
Size: One, 36'x14.7'x12'
Volume: 39,600 I.G.
Retention: 34 min

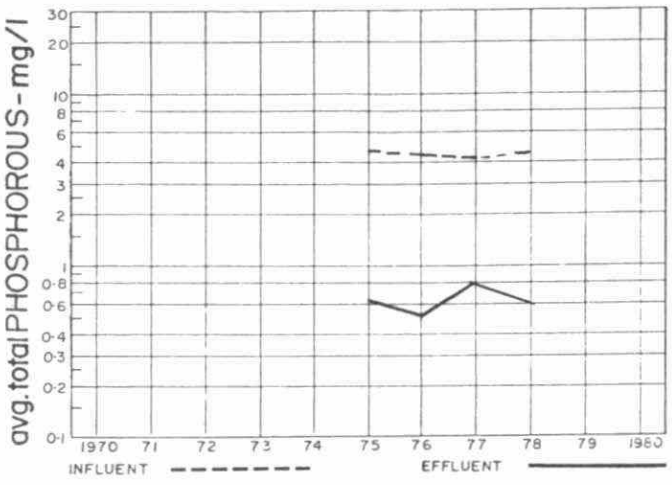
SLUDGE HANDLING

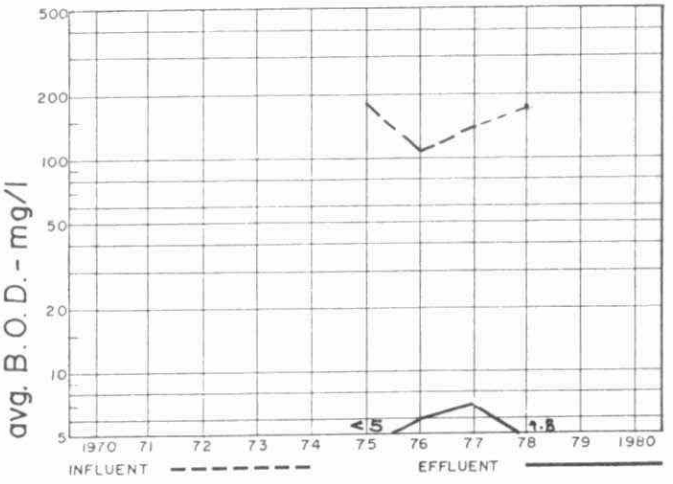
AEROBIC DIGESTERS
Size: Four cells, each 35'x25'x14.75'
Volume: Total 322,000

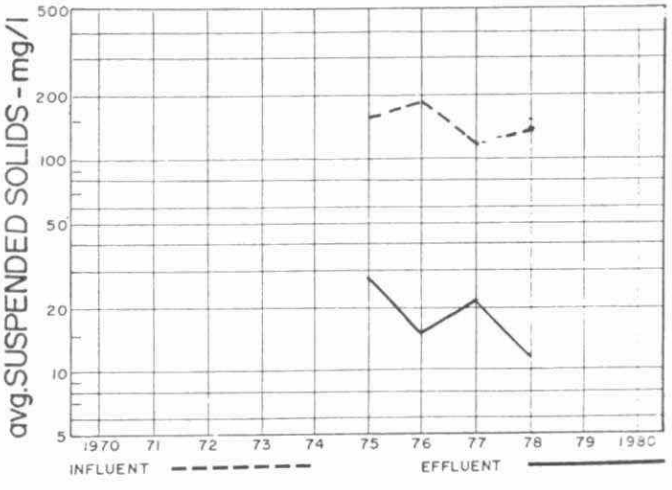
SLUDGE LAGOONS
Size: Three, each 132'x80'x4.5'
Area: 142,600 ft^2











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120001443 — MUNICIPAL PLANT

MUNICIPALITY : DUNNVILLE
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 11,408

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 1.700 MIGD — DESIGN BOD5 : 180.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	30.940	1.000	1.720	2.500	140.0	5.0	96	41.7	129.0	20.0	84	33.7	4.1	.5	87	1.1
FEB	22.690	.810	1.100	1.300	160.0	7.0	95	34.7	87.0	11.0	87	17.2	4.6	.5	89	.9
MAR	35.340	1.140	1.930	5.000	195.0	3.3	98	67.7	140.0	12.0	91	45.2	7.3	.7	90	2.3
APR	33.960	1.130	1.510	2.100	97.0	6.5	93	30.7	71.0	15.0	78	19.0	3.4	.6	82	.9
MAY	25.720	.950	1.110	2.000	105.0	3.5	96	26.1	128.0	11.0	91	30.0	3.8	.7	81	.7
JUN	20.760	.693	1.080	1.800	125.0	3.6	97	25.2	99.0	11.2	88	18.2	4.5	1.3	71	.6
JUL	20.279	.654	1.236	2.400	190.0	2.9	98	37.9	160.0	6.5	95	31.1	10.0	.2	98	1.9
AUG	28.748	.927	1.990	4.500	202.0	6.0	97	56.3	150.0	13.0	91	39.3	5.0	1.2	76	1.0
SEP	22.665	.755	1.073	3.200	290.0	3.5	98	64.9	191.0	11.9	93	40.5	4.3	.8	81	.7
OCT	37.533	1.210	1.854	2.400	352.0	3.5	99	130.8	230.0	13.1	94	81.4	4.3	.4	90	1.4
NOV	27.313	.910	1.416	2.100	130.0	5.5	95	34.0	190.0	13.5	92	48.2	4.7	.4	91	1.1
DEC	25.661	.827	1.736	1.900	100.0	8.0	92	23.6	141.0	12.0	91	33.1	3.6	.4	88	.8
TOTAL	331.609							573.6				436.9				13.4
AVERAGE		.917	MAXIMUM 1.990	MAXIMUM 5.000	173.8	4.8	97		143.0	12.5	91		4.9	.6	87	
NO. OF SAMPLES					21	19			40	56			20	56		

FERGUS

PROJECT Town of Fergus WPCP
PROJECT No 2-0023-58
TREATMENT Activated Sludge
DESIGN FLOW 1.1 mgd
BOD Raw Sewage 200 mg/l
Removal 90%
SS Raw Sewage 200 mg/l
Removal 90%

PRIMARY TREATMENT

GRIT REMOVAL:
Type: Dorr-Oliver, Type T
Detritor

COMMINUTION:
Type: Barminutor
Size: Model B (18")

PRIMARY SEDIMENTATION:
Type: Dorr-Oliver
Size: One 40' x 40' x 9' swd
Volume: 90,000 I. Gal.
Detention: 2.0 hours
Loading: Surface: 687 gal/ft^2/day

SECONDARY TREATMENT

AERATION TANKS:
Type: Mechanical Single Pass
Size 1, 72' x 24' x 10.7" swd
1, 72' x 24' x 12'2" swd
Volume (total) 269,000 I. Gal.
Retention: (total) 5.9 hours

Aerators - Ames Crosta

SECONDARY SEDIMENTATION:
Type: #1 Dorr / #2 Eimco
Size: Two, 35' x 35' x 9' swd
Volume (total) 137,000 I. Gal.
Detention: 3 hours
Loading - Surface 450 gal/ft^2/day

CHLORINATION:
Type: Wallace & Tiernan V-100

CHLORINE CONTACT CHAMBER:
Size: 40' x 15' x 7' swd
Volume: 26,000 I. Gal.
Detention: 34 min.

OUTFALL - to Grand River

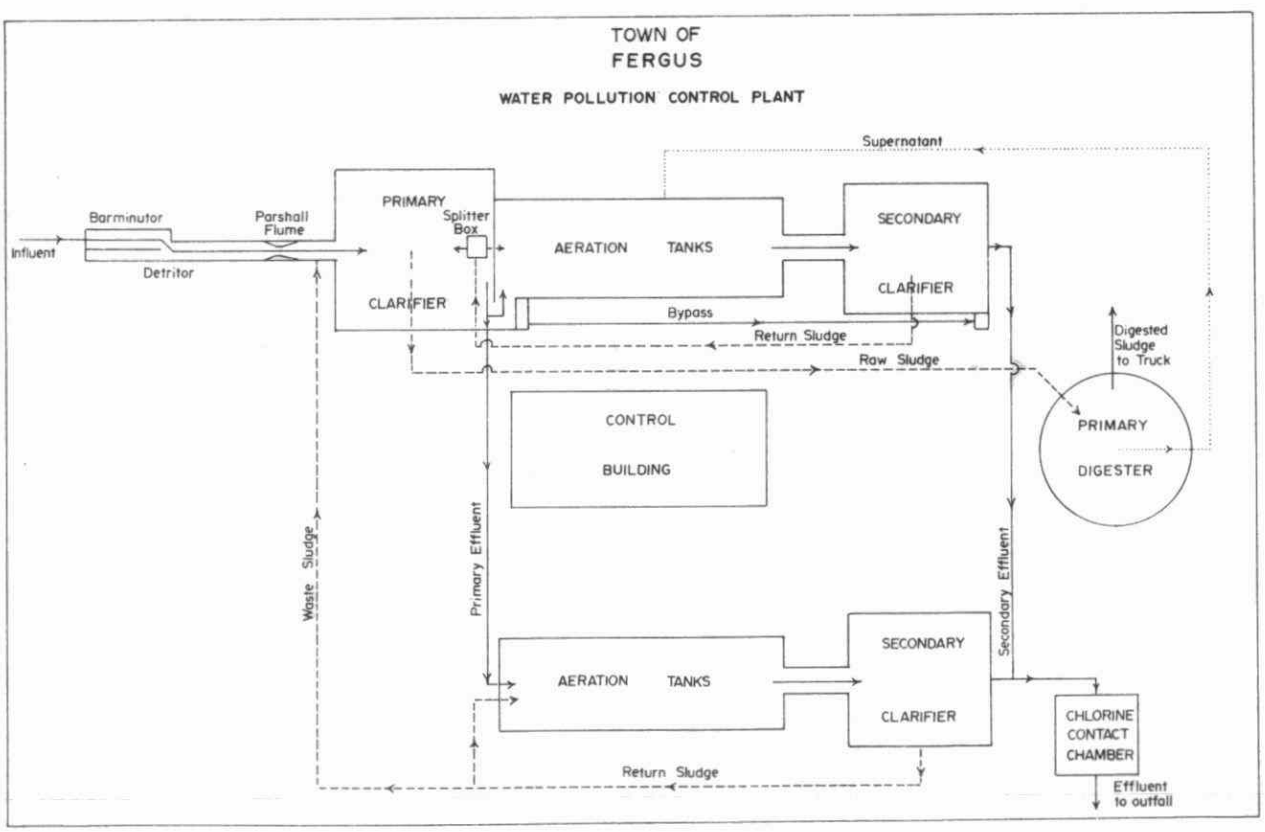
SLUDGE HANDLING

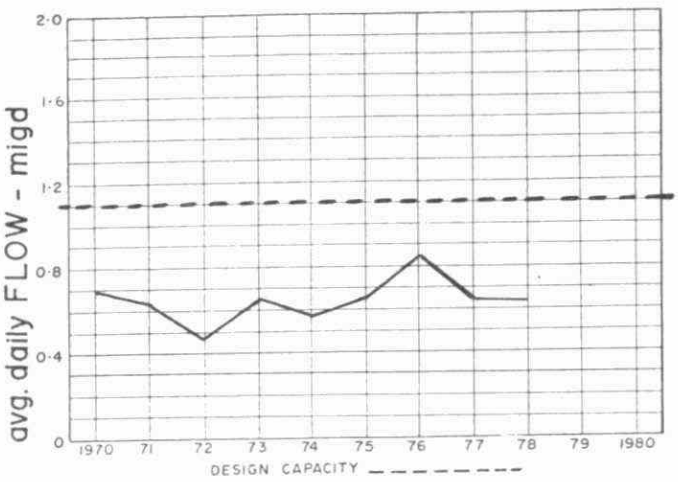
Digestion System

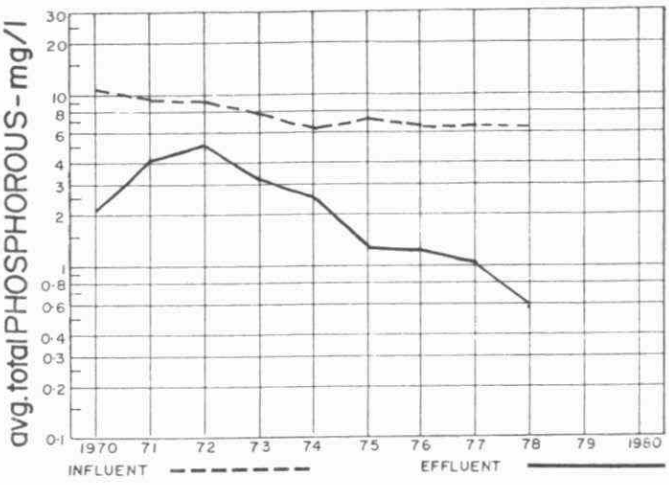
Type: Single stage, with floating cover and one Dorr draft tube mixer
Size: 35' dia x 22' swd (22,700 cu ft or 141,000 gal)
Loading: 1.40 lb/ft^3/mo

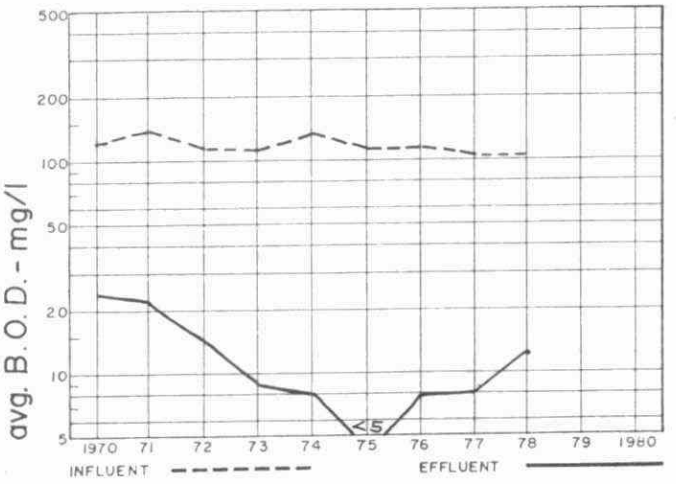
Drying Beds

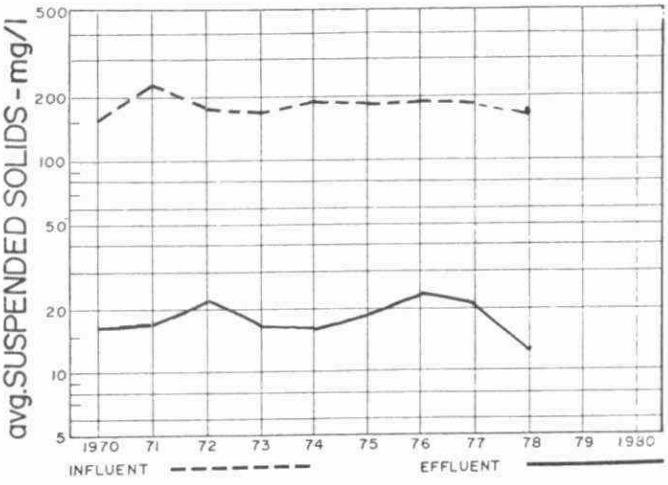
- total area, 7,200 sq ft (discontinued use in 1964)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000249 FERGUS WPCP

MUNICIPALITY : FERGUS
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 5,981

* NO DATA AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.100 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	13.852	.447	.720	1.300	*	*			280.0	36.0	87	33.7	*	1.0		
FEB	14.750	.530	.640	1.500	118.0	6.0	94	16.5	194.0	14.0	92	26.5	8.1	.5	93	1.1
MAR	23.100	.750	1.350	1.880	63.0	15.0	76	11.0	213.0	10.0	95	46.8	5.3	.5	90	1.1
APR	40.520	1.351	1.949	1.940	51.0	50.0	1	.4	79.0	8.2	89	28.6	2.8	.5	82	.9
MAY	23.972	.773	1.179	1.780	50.0	22.0	56	6.7	75.0	11.9	84	15.1	4.4	.6	86	.9
JUN	14.103	.470	.557	.960	110.0	2.0	98	15.2	165.0	13.2	92	21.4	8.0	.4	95	1.0
JUL	12.946	.418	.498	1.000	143.0	6.5	95	17.6	130.0	11.1	91	15.3	7.7	.6	92	.9
AUG	13.795	.445	.609	1.600	90.0	4.3	95	11.8	155.0	9.6	93	20.0	7.1	.8	88	.8
SEP	17.593	.586	1.157	1.700	210.0	*			*	*			9.5	*		
OCT	18.052	.582	.642	1.160	105.0	5.5	94	17.9	182.0	13.3	92	30.4	6.9	.9	86	1.0
NOV	17.636	.588	.800	1.200	80.0	8.5	89	12.6	200.0	12.0	94	33.1	6.5	.6	90	1.0
DEC	18.889	.609	.813	2.000	134.0	7.3	94	23.9	160.0	9.5	94	28.4	7.3	.9	87	1.2
TOTAL	229.208							133.6				299.3				9.9
AVERAGE		.629	MAXIMUM 1.949	MAXIMUM 2.000	104.9	12.7	87		166.6	13.5	91		6.6	.6	90	
NO. OF SAMPLES					18	15			21	222			18	198		

HALDIMAND (CALEDONIA)

Project: Haldimand-Norfolk
Caledonia WPCP

Project No: 2-1009-75

Treatment: Conventional Activated Sludge

Design Flow: 0.5 M.I.G.D.

PRIMARY TREATMENT

RAW SEWAGE PUMPING (at plant)

Type: Two, CHICAGO PUMP
Size: each 1038 IGPD @ 28' TDH

Type: One, SMART TURNER 3HYVBS
Size: 500 IGPM @ 27' TDH

Type: One, CHICAGO PUMP UWLMB4
Size: 332 IGPM @ 27' TDH

Comminutors
Type: Two, CHICAGO PUMP

Bar Screen
Location: in bypass channel

Grit Channels
Size: Two, each 20' x 1.75' x 1.5' awd
Volume (each): 328 I.G.
Retention: 0.9 min (one)

Primary Clarifiers:
Size: One, 17' x 48' x 8.1' awd
Volume: 41,200 I.G.

Size: One, 20' x 20' x 10' awd
Volume: 25,000 I.G.
Retention: (both): 3.2 hr.

Raw Sludge Pumps
Type: Two, CHICAGO PUMPS VTXH 44091
Size: each, 83 I.G.P.M. @ 20' TDH

Type: One, CHICAGO PUMPS HBBLMC4
Size: 50 I.G.P.M. @ 42' TDH

SECONDARY TREATMENT

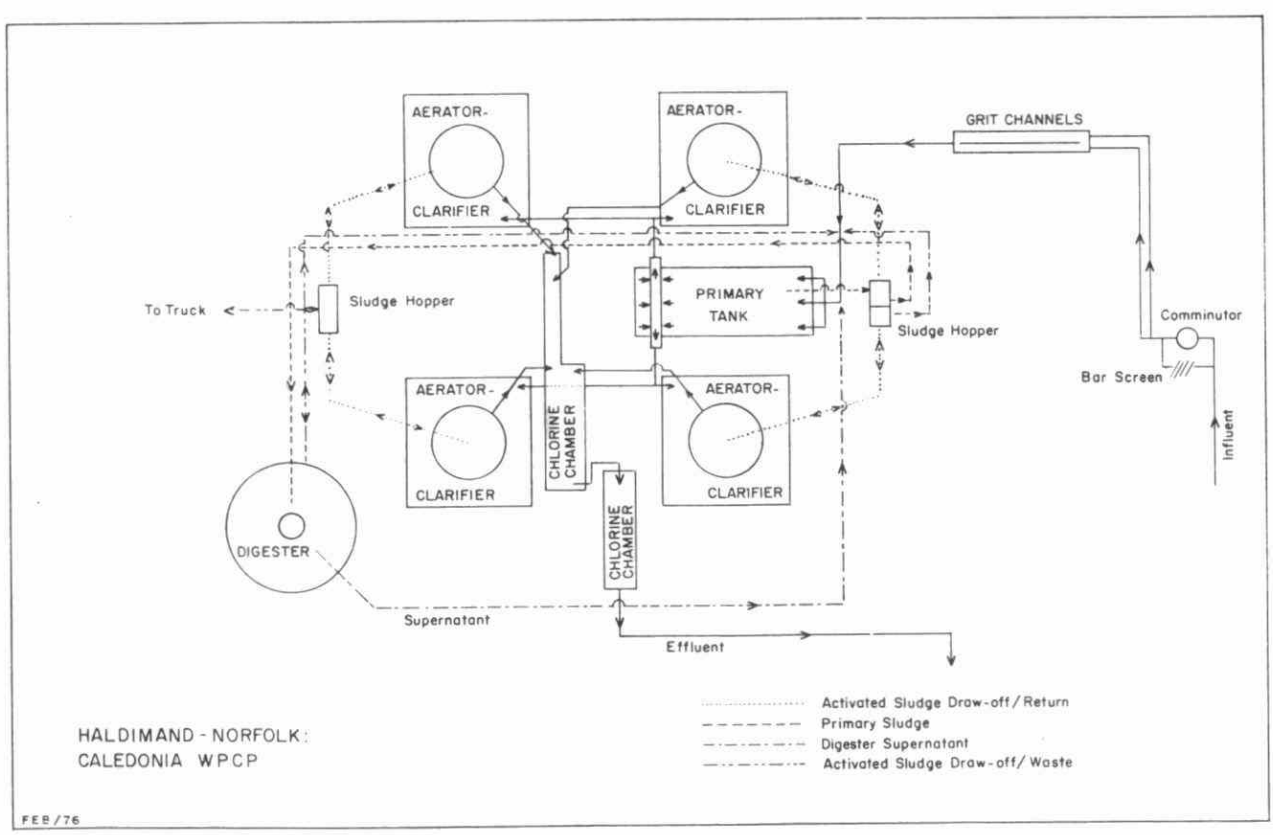
Aerator-Clarifiers
Type: Rectangular clarifier
Size: Four, each 30' x 30' x 10.5'
Volume (total): 236,000 I.G.
Retention (total): 11.3 hr

Chlorination

Contact Chamber:
Size: One, 24' x 8.5' x 5.5'
Volume: 7,000 I.G.
Retention: 20 min.

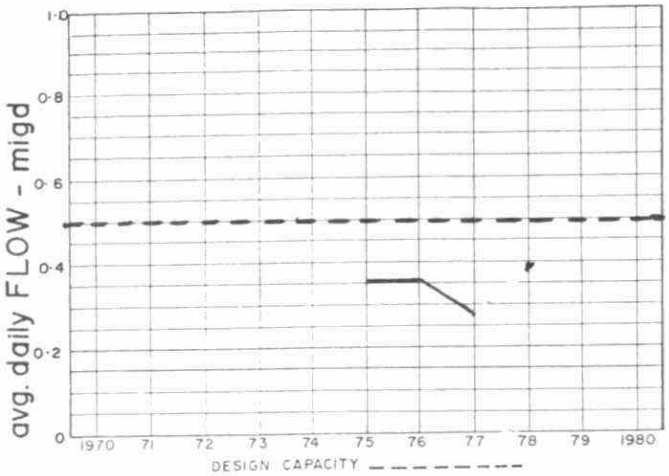
Chlorinator:
Type: W and T LD 6069

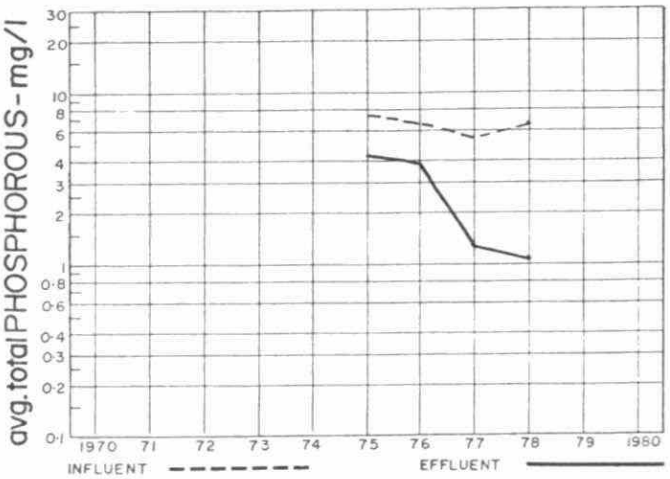
Digester (unheated)
Size: One, 30' dia. x 17' awd
Volume: 80,000 I.G.

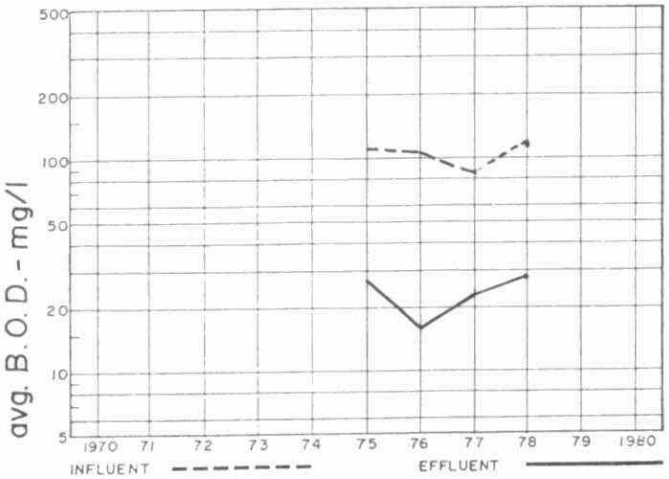


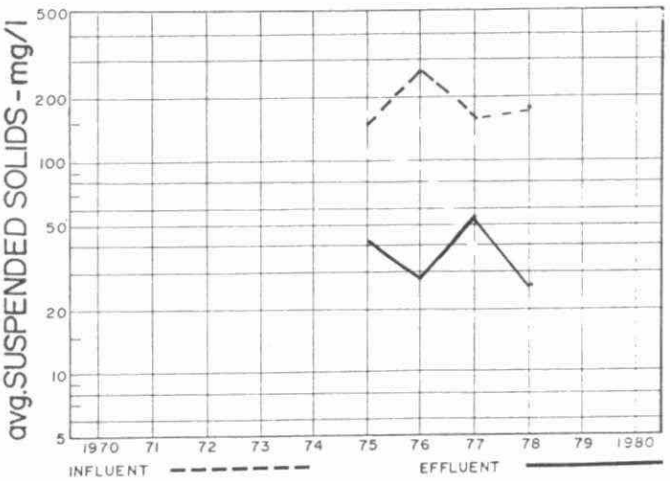
HALDIMAND - NORFOLK:
CALEDONIA WPCP

FEB/76









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120001452 — CALEDONIA PLANT

MUNICIPALITY : HALDIMAND (CALEDONIA)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 16,427

* NO DATA AVAILABLE

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.500 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL *FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	8.425	.272	.514	.980	120.0	22.0	81	8.2	126.0	10.0	92	9.7	5.5	1.5	72	.3
FEB	7.969	.285	.361	.540	137.0	10.0	92	10.1	218.0	19.0	91	15.8	7.3	.5	93	.5
MAR	17.086	.551	1.121	1.600	46.0	36.0	21	1.7	142.0	20.0	85	20.8	3.1	1.2	61	.3
APR	17.281	.576	.896	1.050	110.0	50.0	54	10.3	165.0	30.0	81	23.3	7.7	.2	97	1.2
MAY	18.528	.597	1.105		110.0	43.0	60	12.4	211.0	27.0	87	34.0	7.4	.1	98	1.3
JUN	8.990	.300	.590	.760	100.0	40.0	60	5.3	280.0	40.0	85	21.5	6.5	.4	93	.5
JUL	9.370	.302	.400	.745	80.0	55.0	31	2.3	130.0	15.0	88	10.7	5.5	.2	96	.4
AUG	11.200	.361	.800	1.050	*	*			*	*			*	*		
SEP	10.991	.366	.762	1.150	110.0	19.0	82	10.0	150.0	55.0	63	10.4	7.4	3.2	56	.4
OCT	10.627	.343	.716	1.150	102.0	37.0	63	6.9	152.0	17.0	88	14.3	6.6	3.3	50	.3
NOV	10.463	.349	.531	.990	150.0	7.0	95	14.9	188.0	22.0	88	17.3	7.5	1.5	80	.6
DEC	13.699	.451	.930	1.175	180.0	8.5	95	23.4	220.0	37.0	83	25.0	7.1	.9	86	.8
TOTAL	144.629							105.5				202.8				6.6
AVERAGE		.396	MAXIMUM 1.121	MAXIMUM 1.600	113.1	29.7	73		180.1	26.5	85		6.5	1.1	81	
NO. OF SAMPLES					17	14			27	37			17	15		

111

HALDIMAND (HAGERSVILLE)

PROJECT: Haldimand-Norfolk
(Hagersville) WPCP

PROJECT NO. 1-1001-72

DESIGN FLOW: 0.2 MIGD

PUMPING STATIONS:

Parkview & Mud St. P.S.
Type: Smith & Loveless
Pumps: Two, S & L 4B2
delivering 270 gpm @ 25'TDH

Mary Street P.S.
Type: Smith & Loveless
Pumps: Two, Allis Chalmers 300F7M1
delivering 252 USgpm @ 20'TDH

Tuscarora St.
Type: built on site
Pumps: One, Smart Turner
495382-2-1/2HXVS
(with identical unit as stand-by)

BAR SCREEN
Bars: 1½" x ½"

COMMINUTOR
Type: One Procor C785
Size: 10R, 45 RPM

RAW SEWAGE PUMPS
Type: Two, Smart Turner 3HYVBT
Size: 250 Igpm @ 20' TDH

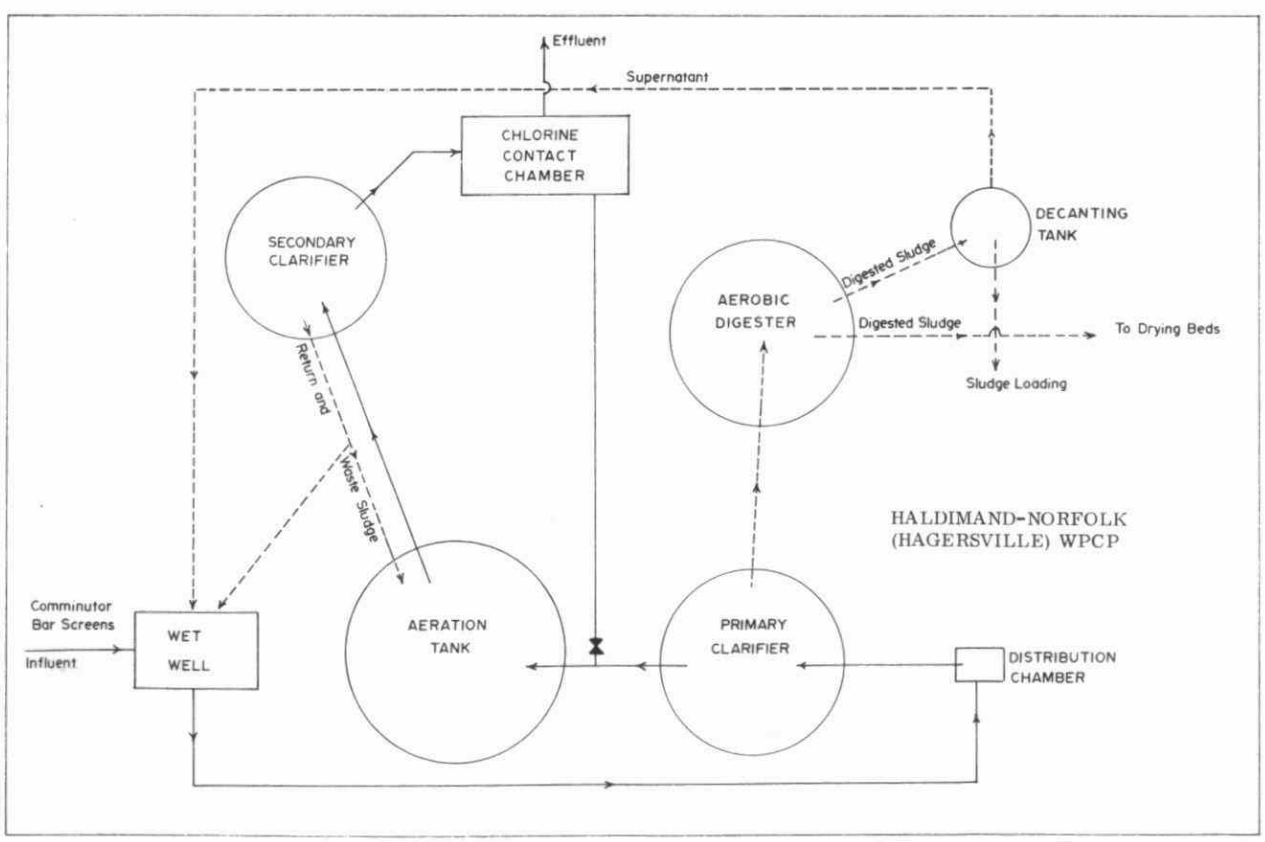
PRIMARY CLARIFIER
Type: circular, 25'dia. x 10'swd
Size: 30600 I.G.
Retention: 2.9 hr.
Loading-surface: 510 I.gal/ft^2/day

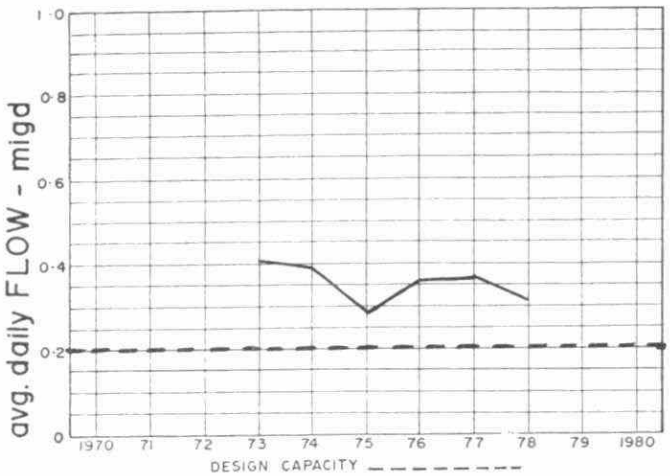
AERATION TANK
Type: circular, 36' dia. x 8'swd
Size: 50,800 I.G.
Retention: 4.8 hr.
Mechanism: 'Vortair' Mechanical

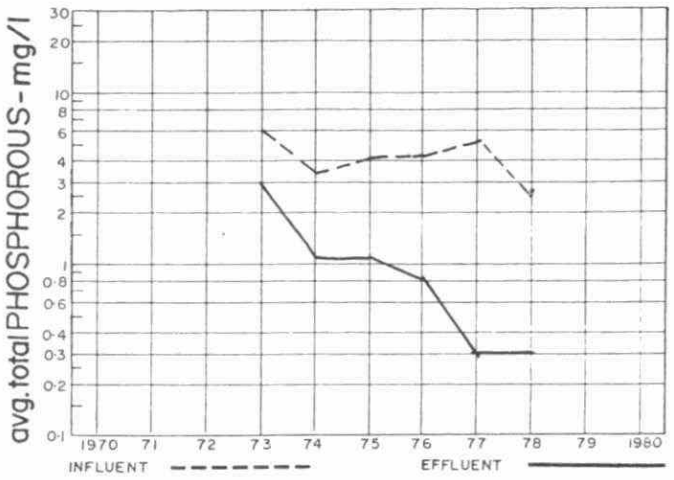
SECONDARY CLARIFIER
Type: circular 24' dia x 9'swd
Size: 25,400 I.G.
Retention: 2.4 hr
Loading-surface: 551 I.G./ft^2/day

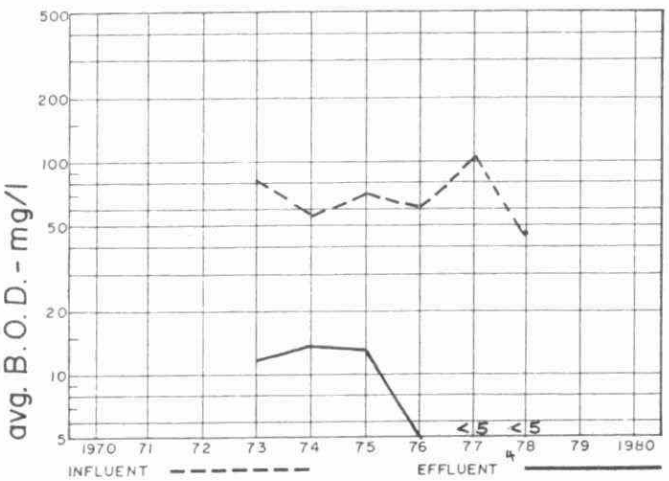
CHLORINE CONTACT CHAMBER
Size: 6' x 15.5' x 7'
4100 I.G.
Retention: 25 min

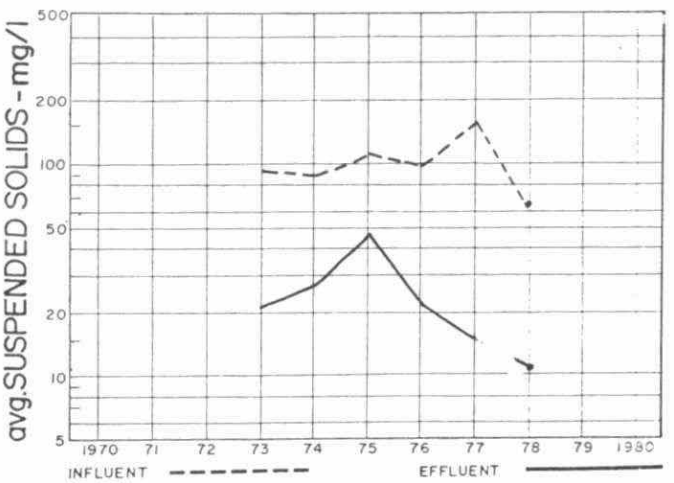
SLUDGE DRYING BEDS
Area: 7600 ft^2











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001024 — HAGERSVILLE WPCP

MUNICIPALITY : HALDIMAND (HAGERSVILLE)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

* COMMENT: HYDRAULIC OVERLOAD

CURRENT POPULATION : 16,427

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- * FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	12.272	.396	.555		20.0	3.0	85	2.0	25.0	8.0	68	2.0	2.0	.2	90	.2
FEB	8.049	.287	.465		43.0	3.0	93	3.2	43.0	9.0	79	2.7	2.6	.2	92	.1
MAR	12.804	.413	.526		80.0	2.0	97	9.9	170.0	24.0	85	18.6	2.6	.5	80	.2
APR	12.980	.432	.530		33.0	7.9	76	3.2	35.0	10.0	71	3.2	2.1	.3	85	.2
MAY	10.125	.327	.485		44.0	1.2	97	4.3	65.0	9.0	86	5.6	3.1	.3	90	.2
JUN	8.313	.277	.358		47.0	4.8	89	3.5	53.0	14.0	73	3.2	2.8	.2	92	.2
JUL	8.047	.260	.317		53.0	4.3	91	3.9	55.0	9.5	82	3.6	3.8	.2	94	.2
AUG	7.977	.257	.463		50.0	4.0	92	3.6	45.0	5.0	88	3.1	3.0	1.2	60	.1
SEP	8.667*	.288	.516		75.0	5.0	93	6.0	110.0	18.0	83	7.9	3.2	.3	90	.2
OCT	10.755	.346	.525		43.0	1.8	95	4.4	48.0	11.5	76	3.9	3.8	.2	94	.3
NOV	9.186	.306	.485		49.0	1.6	96	4.3	80.0	5.5	93	6.8	3.3	.2	93	.2
DEC	10.285	.331	.513		28.0	2.5	91	2.6	50.0	4.3	91	4.7	2.0	.2	90	.1
TOTAL	119.460							50.9				65.3				2.2
AVERAGE		.327	MAXIMUM .555	MAXIMUM	47.0	3.4	92		64.9	10.6	83		2.8	.3	88	
NO. OF SAMPLES					20	20			20	20			20	20		

KITCHENER

PROJECT	City of Kitchener WPCP
PROJECT NO. previously	1-0314-72 2-0019-58
TREATMENT	Conventional Activated Sludge
DESIGN FLOW	27 MIGD
RAW SEWAGE	BOD 275 mg/l SS 300 mg/l

PRIMARY TREATMENT

Screening

- Three (incl. one standby) mechanically cleaned bar screens by Dorr-Oliver-Long. Set in concrete channels 5' wide x 3.5' deep @ 75° incline. Bars are 3/8" thick 2" wide with 1" clear between bars.

Grit Removal

Two detritor tanks 35' square x 30" deep. 26(U.S.) MGD.

Primary Clarifiers

- Four, 190' x 65' x 12' SWD 146,900 ft^3/tank.

SECONDARY TREATMENT

Aeration Tanks

- 8 Concrete cells 65' square with 15'-6" SWD with mixed liquor volume 62,000 ft^3 ea.
- 4 tanks 210'x60'x13'-3" deep (total 4.2 million gallons).
- Ames Crosta Aerators.

Secondary Clarifiers

- 4 tanks 110' dia. with 10' SWD with Dorr-Oliver Sludge collector type RSR.
- 4 tanks 80' dia. with 10' SWD. 2.4 hrs. retention. Surface loading 672 gal/ft^2/day. Weir Loading 13,400 gal/ft^2/day.

Primary Digesters

- Two 65' dia. x 22' SWD (144,000 ft^3 or 0.9 mg.) loading 1.08 lb/Cu. Ft./day
- Two 110' dia. x 25' SWD (475,000 ft^3 or 3.0 mg) loading 0.18 lb/Cu. Ft./day.

Secondary Digester

- Two 100' dia. x 29' SWD (400,000 ft^3 or 2.5 mill. gall.) loading 0.29 lb/ft^3/mo. type: Dorr, floating cover.

Vacuum Filter

Type: Konline - Sanderson
Size: 500 sq. ft. (one only).

Sludge Lagoon

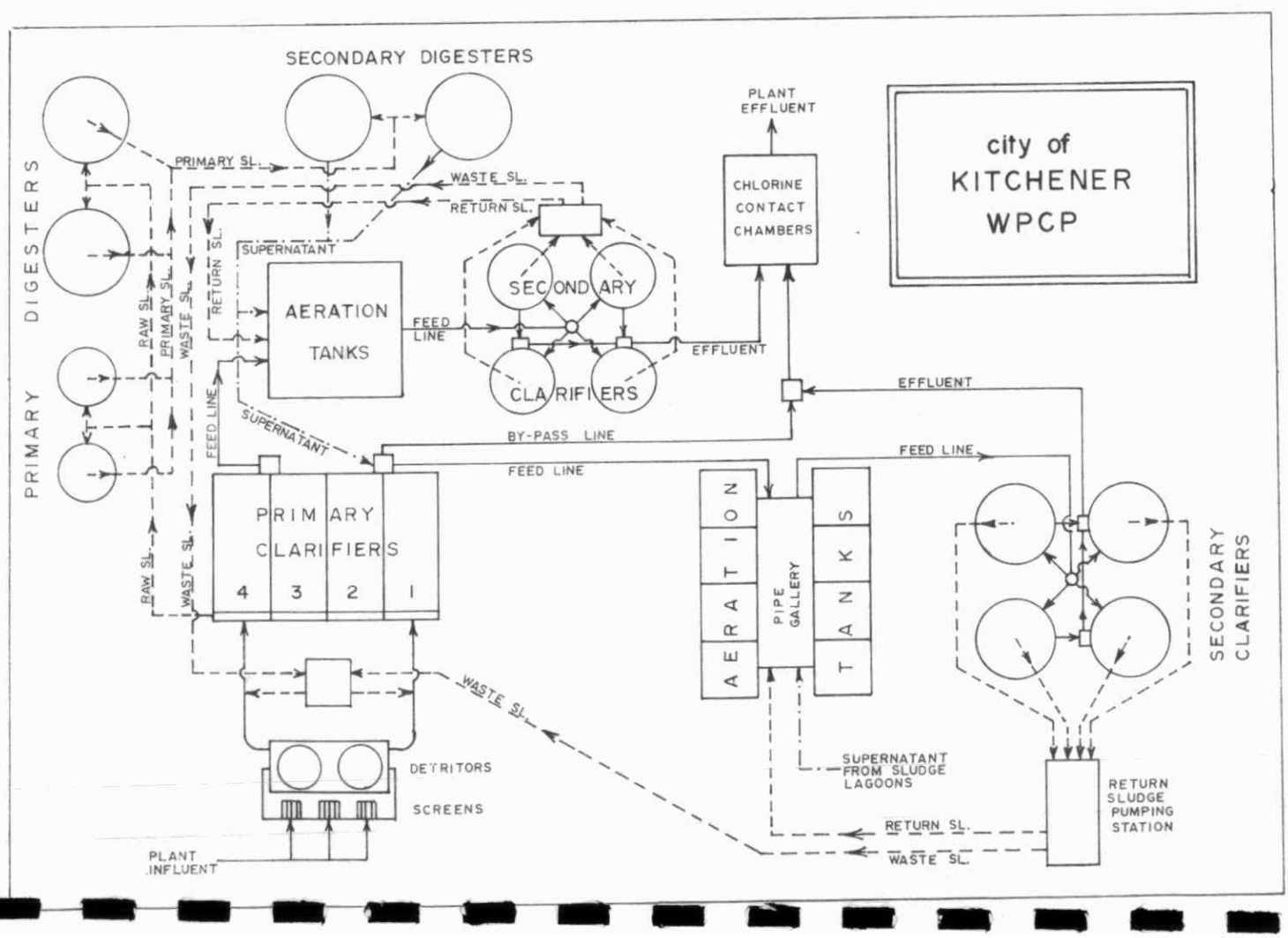
Area: 16 acres.

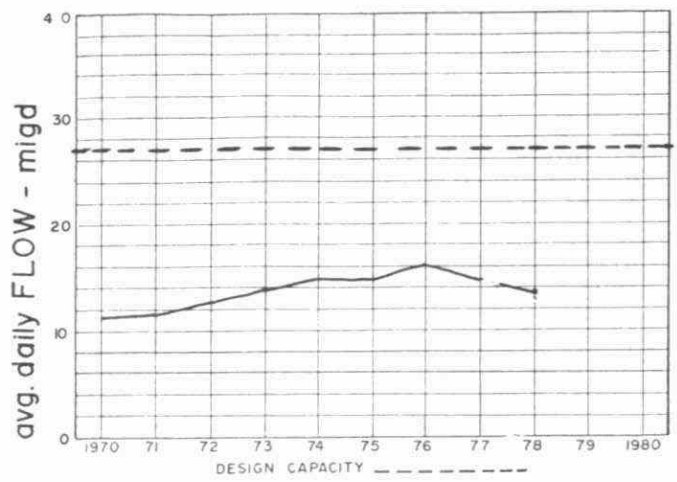
Sand Filter

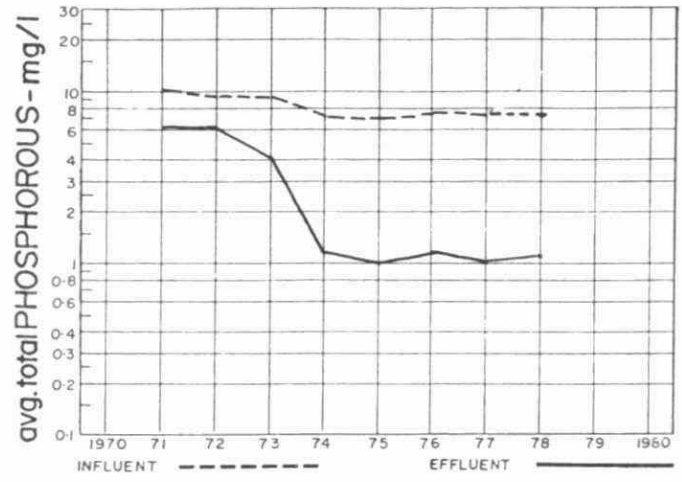
Ten - 16' x 100' = 16,000 sq. ft. with automatic backwash.

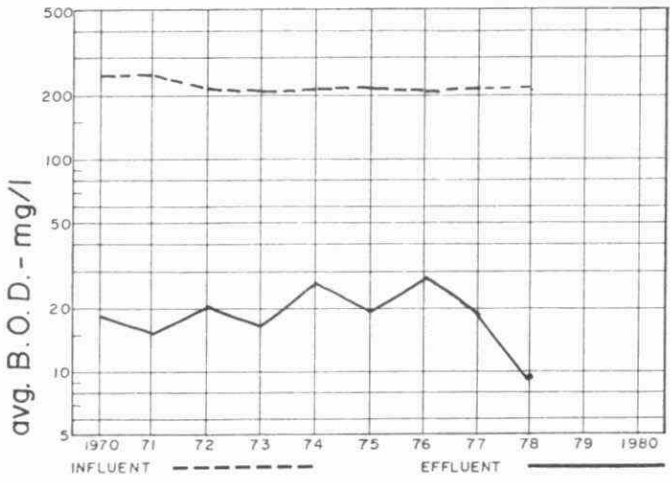
Chlorination

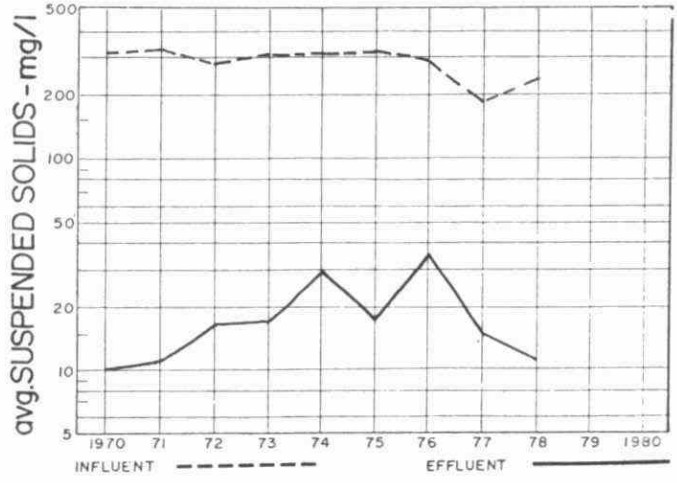
- One contact chamber 141,000 gallons with 15 min. retention.
- One contact chamber 451,000 gallons with 15 min. retention.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000374 KITCHENER W P C P

MUNICIPALITY : KITCHENER
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 135,288

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 27.000 MIGD DESIGN BOD5 : 275.0 MG/L DESIGN SUSP.SOLIDS : 300.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	439.100	14.200	19.200		240.0	13.0	94	996.7	150.0	21.0	86	566.4	10.0	1.6	84	36.8
FEB	390.200	13.900	19.400		233.0	10.2	95	869.3	416.0	13.4	96	1570.9	6.7	1.5	77	20.2
MAR	431.800	13.900	20.200		201.0	8.0	96	833.3	175.0	14.0	92	695.1	8.6	1.0	88	32.8
APR	469.480	15.650	19.530	28.000	191.0	11.0	94	845.0	135.0	7.0	94	600.9	7.2	1.1	84	28.6
MAY	412.580	13.310	14.580	20.000	211.0	10.4	95	827.6	189.0	9.7	94	739.7	8.2	1.2	85	28.8
JUN	385.530	12.850	15.230	20.000	205.0	7.8	96	760.2	241.0	7.7	96	899.4	5.4	1.1	79	16.5
JUL	373.160	12.030	14.660	19.000	164.0	7.4	95	584.3	186.0	11.9	93	649.6	7.9	1.4	82	24.2
AUG	368.860	11.898	14.540	20.000	193.0	11.2	94	670.5	220.0	8.9	95	778.6	7.3	1.0	86	23.2
SEP	430.460	14.350	20.880	28.000	194.0	11.1	94	787.3	266.0	7.9	97	1111.0		1.1		
OCT	401.710	12.960	14.420	19.000	237.0	14.5	93	893.8	258.0	9.8	96	997.0	8.1	1.5	81	26.5
NOV	414.730	13.824	17.080	22.000	289.0	8.4	97	1163.7	301.0	8.6	97	1212.6	8.0	1.4	82	27.3
DEC	426.820	13.770	18.040	26.000	236.0	4.5	98	988.0	305.0	8.0	97	1267.6	7.2	.6	90	27.8
TOTAL	4944.430							10219.7				11088.8				292.7
AVERAGE		13.554	MAXIMUM 20.880	MAXIMUM 28.000	216.1	9.7	95		236.8	10.6	95		7.6	1.2	84	
NO. OF SAMPLES					96	82			226	205			24	240		

WATERLOO

PROJECT City of Waterloo WPCP

PROJECT NOS.	2-0022-58 2-0203-66
DESIGN FLOW	6.0 mgd
DESIGN POPULATION	63,300
BOD - Raw Sewage	300 mg/l
- Removal	90%
SS - Raw Sewage	270 mg/l
- Removal	90%

PRIMARY TREATMENT

Comminution

One Worthington

Sewage Lift Station

Type: Canada Pump
Size: Two 2900 gpm @ 32' tdh (el)
One 5000 gpm @ 32' tdh (diesel)

Grit Removal

Type: Dorr Detritor
Size: Two 14' x 14' x 1.6' (3,900 gal)
Retention: 0.94 min

Primary Sedimentation

Type: Dorr
Size: Two 75' dia x 13' swd
Ret (0.772 mil gal)
Loading: Surface, 680 gal/ft
Weir, 12,700 gal/ft
Retention: 3.09 hours
Loading: Surface, 680 gal/ft^2/day
Weir, 12,700 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air, single-pass with turbine aerators
Size: Four 134' x 32½' x 15½'
(1.68 mil gal)
Retention: 6.7 hours

Diffusers

(a) Spargers (66/tank)
(b) "Lightnin" Turbine (3/tank)

Air Supply

Type: Sutorbilt
Size: Two 3,750 cfm

Secondary Sedimentation

Size: Two, 65' dia x 10' swd
One, 90' dia x 10' swd
(855,000 gal)
Retention: 3.4 hr

CHLORINATION

Type: Wallace & Tiernan
Size: One, 500 lb/day

OUTFALL

- to Grand River

SLUDGE HANDLING

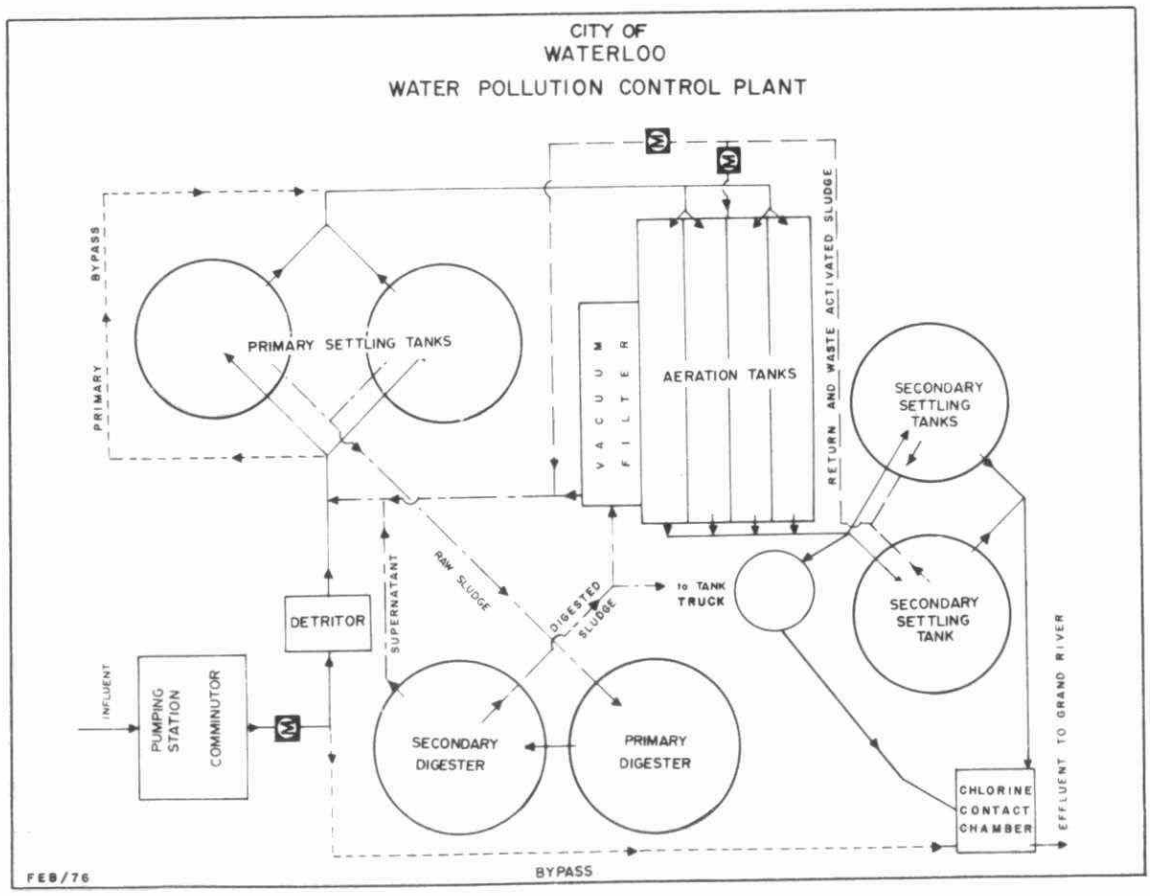
Digestion System - Two-stage

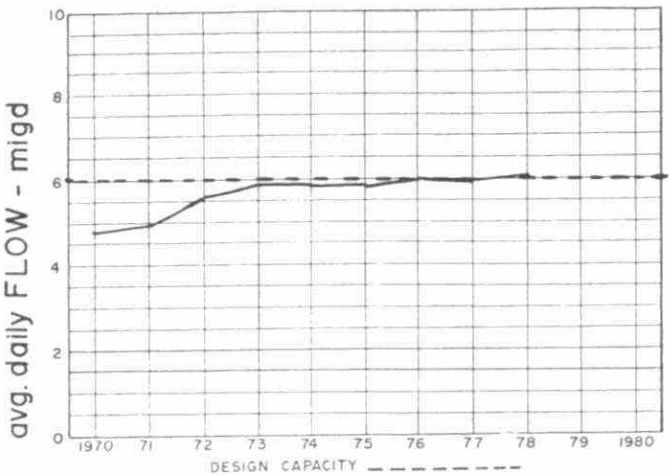
Primary - fixed cover
Type: Dorr draft tubes (3)
Size: One 80' x 21½' swd
(124,500 cu ft or 0.776 mil gal)
Loading: 3.5 lb/cu ft/mo

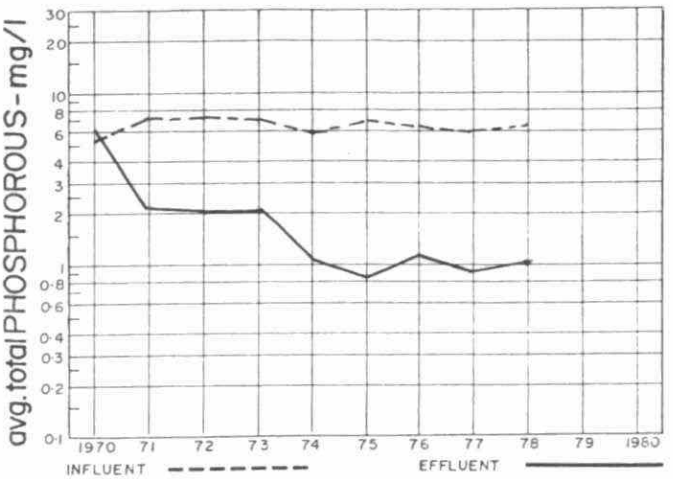
Secondary -
Size: One 80' dia x 20' swd
(117,000 cu ft or 0.73 mil gal)
Total Loading: 1.8 lb/cu ft/mo
Liquid sludge haulage.

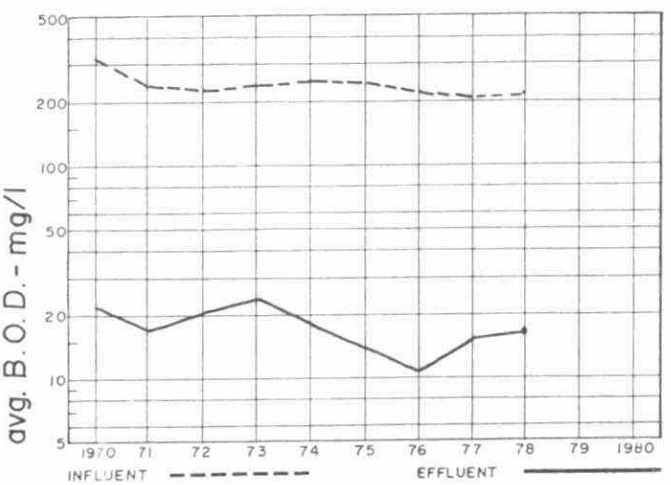
Vacuum Filter

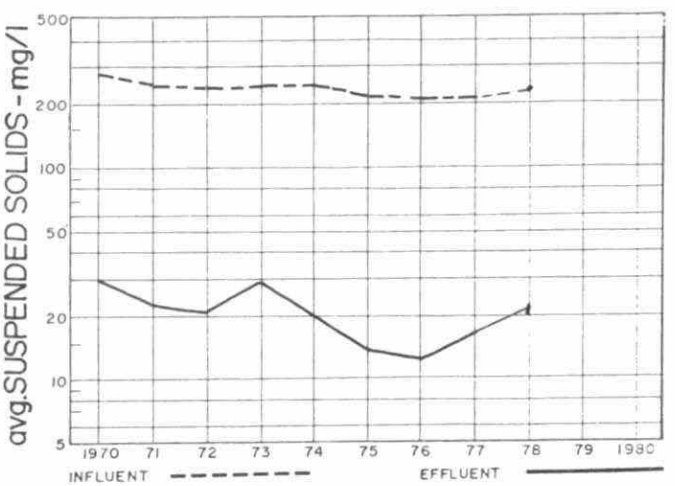
Type: Komline-Sanderson
Size: One 300 sq ft











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000793 — WATERLOO WPCP

MUNICIPALITY : WATERLOO
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

CURRENT POPULATION : 50,291

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 6.000 MIGD — DESIGN BOD5 : 300.0 MG/L — DESIGN SUSP.SOLIDS : 270.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	169.300	5.500	6.800	15.000	198.0	22.0	88	297.9	224.0	18.0	91	348.7	6.6	1.2	81	9.1
FEB	148.100	5.300	6.300	16.600	192.0	19.0	90	256.2	218.0	16.0	92	299.1	7.2	1.0	86	9.1
MAR	197.900	6.400	9.400	17.800	218.0	20.0	90	391.8	189.0	24.0	87	326.5	6.3	1.3	79	9.8
APR	234.792	7.826	10.994	19.200	123.0	16.7	86	249.5	184.0	31.4	82	358.2	5.0	1.0	80	9.3
MAY	199.429	6.433	7.709	18.000	159.0	16.0	89	285.1	225.0	22.0	90	404.8	6.0	.8	86	10.3
JUN	169.303	5.643	6.609	20.000	184.0	16.0	91	284.4	240.0	17.0	92	377.5	6.7	.8	88	9.9
JUL	143.741	4.637	5.625	11.600	169.0	15.0	91	221.3	251.0	15.0	94	339.2	6.5	.7	89	8.3
AUG	151.071	4.873	5.592	14.100	222.0	20.0	90	305.1	258.0	23.0	91	355.0	6.2	.7	88	8.3
SEP	180.870	6.029			259.0	20.0	92	432.2	301.0	14.0	95	519.0	6.6	1.0	84	10.1
OCT	199.241	6.427			270.0	20.0	92	498.1	354.0	20.0	94	665.4	6.8	1.5	77	10.5
NOV	197.516	6.583			266.0	27.0	89	472.0	263.0	29.0	88	462.1	8.4	1.4	83	13.8
DEC	198.770	6.412	8.536		234.0	13.0	94	439.2	240.0	20.0	91	437.2	6.8	1.4	79	10.7
TOTAL	2190.033							4132.8				4892.7				119.2
AVERAGE		6.005	MAXIMUM 10.994	MAXIMUM 20.000	207.8	18.7	90		245.5	20.7	91		6.5	1.0	83	
NO. OF SAMPLES					93	92			233	232			100	232		

WOOLWICH (ELMIRA)

PROJECT	Woolwich Twp. (Elmira) WPCP
PROJECT NO.	2-0096-61
DESIGN FLOW	
Municipal	0.50 mgd
Industrial	0.18 mgd
Total	0.68 mgd
DESIGN POPULATION	5,000
BOD -	
Municipal	170 mg/l
Industrial	1100 mg/l
Combined	420 mg/l
SS -	
Municipal	300 mg/l
Industrial	320 mg/l
Combined	306 mg/l

PRETREATMENT -- INDUSTRIAL WASTES

Type -- Balancing tank plus neutralization facilities

PRIMARY TREATMENT

Screening

One coarse manually-cleaned bar screen

Grit Removal

Type: Grit channels, manually cleaned

Primary Sedimentation

Type: Link Belt
Size: Two 40' dia x 8' swd (125,000 gal)
Retention: 4.42 hours
Loading: Surface, 270 gal/ft^2/day
Weir, 2,700 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Mechanical aeration
Size: Four 30' x 30' x 14.2' (48,00 cu ft or 300,000 gal)
Retention: 10.6 hours

Aerators

Type: Four Ames-Crosta

Secondary Sedimentation

Type: Rex Chainbelt
Size: Two 45' dia x 7' swd (22,300 cu ft or 139,000 gal)
Retention: 4.9 hours
Loading: Surface, 214 gal/ft^2/day
Weir, 2,400 gal/ft/day

CHLORINATION

Type: F & P

Chlorine Contact Chamber

Size: Two 30' x 6' x 4.74' (1,700 cu ft or 10,600 gal)
Retention: 22.5 min

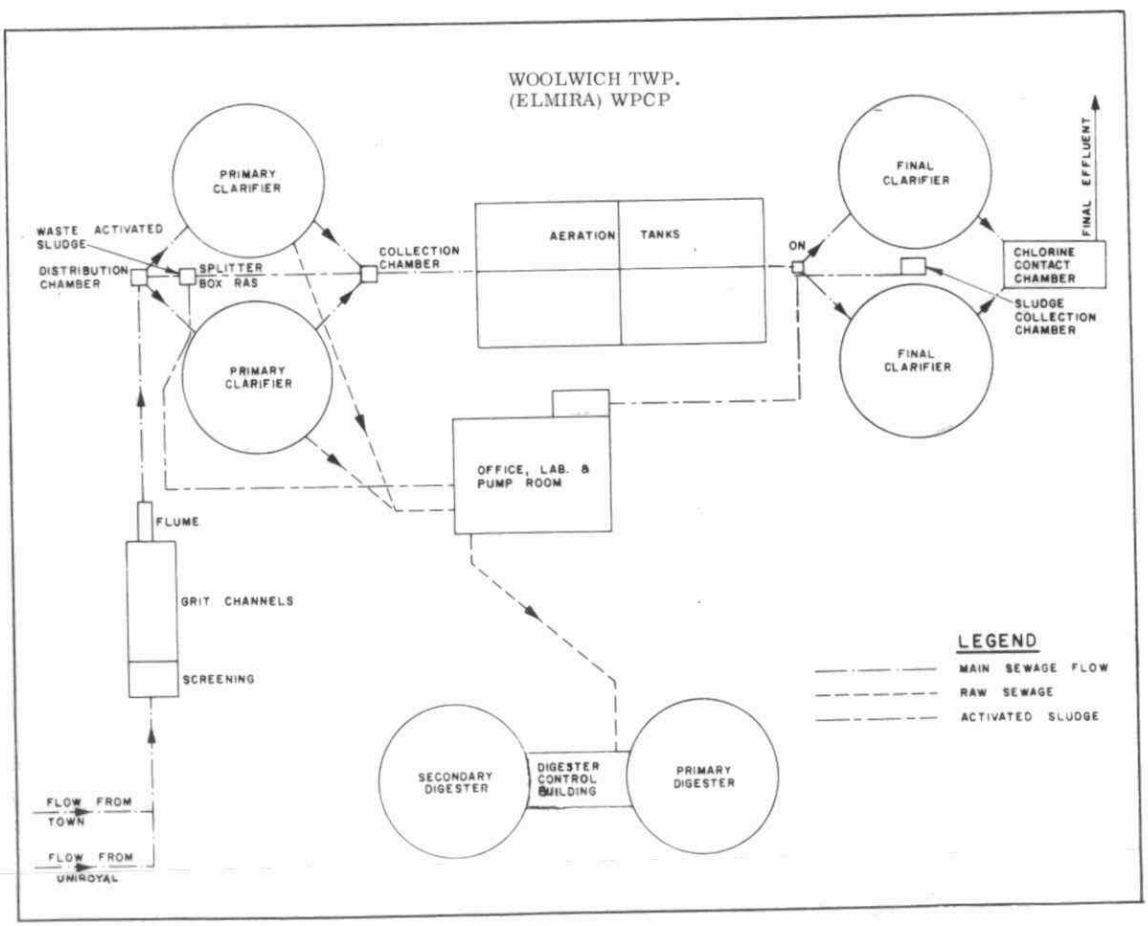
OUTFALL

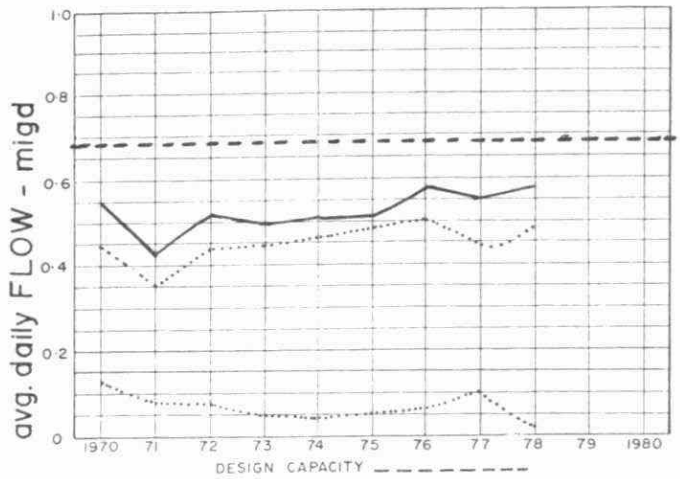
- to Canangagique Creek

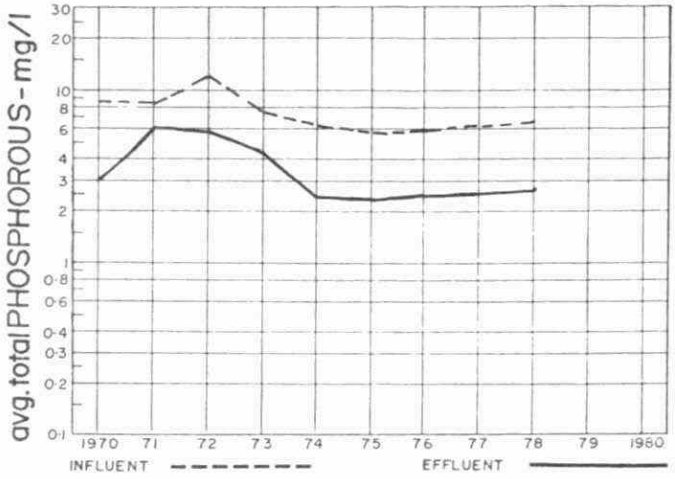
SLUDGE HANDLING

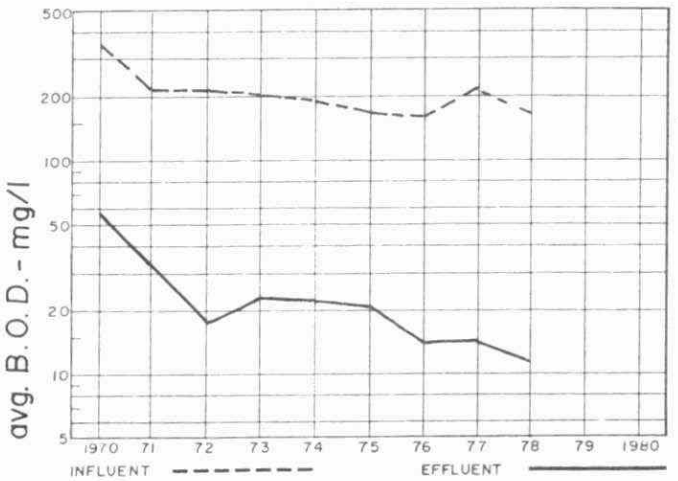
Digestion System

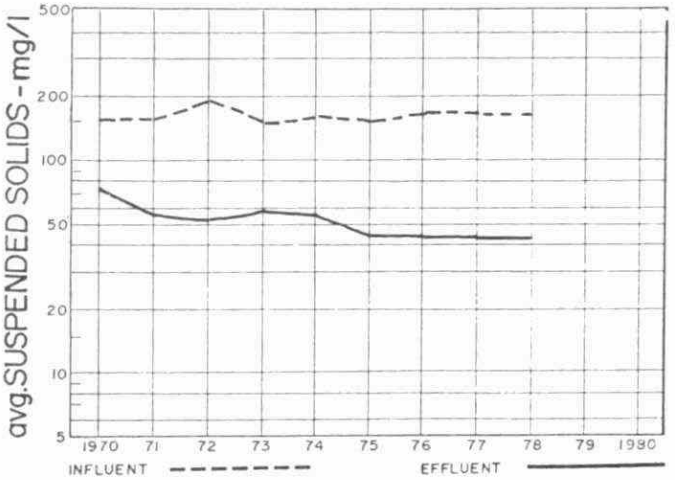
Type: Two-stage digestion
Primary - One 30' dia tank with two Dorr mixers (97,100 gal)
Secondary - One 30' dia tank (15,200 cu ft or 94,700 gal)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000150 — ELMIRA WPCP

MUNICIPALITY : WOOLWICH (TOWN & IND)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

* COMMENT: THIS SYSTEM TREATS INDUSTRIAL AND DOMESTIC WASTES. THE PLANT IS ABLE TO TREAT EACH WASTE STREAM SEPARATELY, (SEE FOLLOWING REPORTS)

CURRENT POPULATION : 16,392

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : * 0.680 MIGD (COMBINED) — DESIGN BOD5 : * 420.0 MG/L (COMBINED) — DESIGN SUSP.SOLIDS : * 306.0 MG/L (COMBINED)

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	13.029	.420	.540		158.0	13.0	91	18.8	158.0	32.0	79	16.4	9.4	1.6	82	1.0
FEB	11.250	.400	.480		233.0	12.0	94	24.8	179.0	28.0	84	16.9	6.9	1.7	75	.5
MAR	20.260	.650	1.570		193.0	9.0	95	37.2	140.0	63.0	55	15.6	5.6	3.1	44	.9
APR	33.711	1.124	1.942		166.0	8.6	94	53.0	143.0	35.1	75	36.3	4.7	1.1	76	1.2
MAY	17.624	.569	1.052		173.0	8.0	95	29.0	123.0	38.0	69	14.9	5.4	1.9	64	.6
JUN	16.515	.549	.700		198.0	13.5	93	30.4	173.0	49.4	71	20.4	5.3	2.9	45	.3
JUL	14.448	.466	.655		203.0	13.6	93	27.3	246.0	58.0	76	27.1	8.1	4.1	49	.5
AUG	13.065	.421	.573		151.0	28.0	81	16.0	173.0	68.0	60	13.7	6.6	5.7	13	.1
SEP	20.093	.673	1.607		146.0	15.3	89	26.2	161.0	64.0	60	19.4	7.3	4.1	43	.6
OCT	18.382	.592	1.100		103.0	13.0	87	16.5	141.0	26.3	81	21.0	7.1	2.7	61	.8
NOV	14.546	.484	.744		120.0	6.7	94	16.4	155.0	26.7	82	18.6	7.1	2.6	63	.6
DEC	18.335	.590	.991		137.0	7.2	94	23.7	133.0	25.5	80	19.7	8.0	1.0	87	1.2
TOTAL	211.258							319.3				240.0				7.9
AVERAGE		.578	MAXIMUM 1.942	MAXIMUM	165.0	12.3	92		160.4	42.8	73		6.7	2.7	60	
NO. OF SAMPLES					39	33			101	100			39	40		

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110003932 — WOOLWICH (ELMIRA TOWN)

MUNICIPALITY : WOOLWICH (ELMIRA TOWN)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

* COMMENT: THE EFFLUENT BOD & SS & T.PHOS SHOWN BELOW CONSTITUTE THE FINAL CONCENTRATIONS AFTER THE INDUSTRIAL AND DOMESTIC WASTES ARE MIXED TOGETHER.

CURRENT POPULATION : 16,392

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.500 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 300.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	10.470	.340	.540	1.720	103.0				140.0				7.3			
FEB	8.240	.290	.360	1.090	179.0				171.0				8.0			
MAR	16.490	.530	1.400	2.040	120.0				146.0				6.0			
APR	31.874	1.062	1.922	3.000	112.0				125.0				4.9			
MAY	16.040	.517	1.012		134.0				141.0				5.5			
JUN	13.748	.458	.617		238.0				207.0				9.0			
JUL	11.431	.368	.536		242.0				243.0				9.7			
AUG	12.035	.388	.573		175.0				193.0				7.6			
SEP	16.946	.564	1.486	2.120	143.0				173.0				7.6			
OCT	16.075	.519	.974	2.080	149.0				174.0				10.2			
NOV	11.735	.391	.625	2.060	160.0				163.0				7.6			
DEC	16.048	.518	.887	2.800	173.0				144.0				8.1			
TOTAL	181.132							*(319.3)				*(240.0)				*(7.9)
AVERAGE		.495	MAXIMUM 1.922	MAXIMUM 3.000	160.6	*(12.3)	*(92)		168.3	*(42.8)	*(73)		7.6	*(2.7)	*(60)	
NO. OF SAMPLES					46				98				40			

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110003923 — WOOLWICH (ELMIRA IND.)

MUNICIPALITY : WOOLWICH (ELMIRA IND.)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

* COMMENT: THE EFFLUENT BOD & SS & T.PHOS SHOWN BELOW CONSTITUTE THE FINAL CONCENTRATIONS AFTER THE INDUSTRIAL AND DOMESTIC WASTES ARE MIXED TOGETHER.

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.180 MIGD — DESIGN BOD5 : 1,100.0 MG/L — DESIGN SUSP.SOLIDS : 320.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.559	.083	.115		1000.0				58.0				10.9			
FEB	3.012	.107	.136		1362.0				116.0				1.8			
MAR	3.772	.122	.169		783.0				365.0				4.9			
APR	1.837	.061	.132		410.0				143.0				1.7			
MAY	1.584	.051	.090		533.0				199.0				3.9			
JUN	2.767	.092	.168		303.0				174.0				1.1			
JUL	3.017	.097	.144		215.0				161.0				2.2			
AUG	1.032	.033	.045		116.0				168.0				1.4			
SEP	3.153	.105	.265		108.0				142.0				2.8			
OCT	2.307	.074	.138		32.0				74.0				1.8			
NOV	2.811	.093	.124		55.0				65.0				.7			
DEC	2.287	.074	.115		187.0				94.0				.8			
TOTAL	30.138							*(319.3)				*(240.0)				*(7.9)
AVERAGE		.083	MAXIMUM .265	MAXIMUM	425.3	*(12.3)	*(92)		146.5	*(42.8)	*(73)		2.8	*(2.7)	*(60)	
NO. OF SAMPLES					42				102				41			

Ministry of the Environment
Ontario

Central Region

③

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386

Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

CAMPBELLFORD

PROJECT Town of Campbellford WPCP

PROJECT NO. 1-0028-66

TREATMENT Conventional Secondary

DESIGN FLOW 1.3 MIGD

BOD - Raw Sewage - 140 mg/l

SS - Raw Sewage - 133 mg/l

DESIGN POPULATION 4200

PRIMARY TREATMENT

Grit Removal

Type: Channels, manually cleaned
Size: Two 36'6"x2'8"x3'9"
Flow Velocity: 1 fps

Screening - Type: Manually cleaned

Comminution

Type: Worthington model 15C-5

Primary Sedimentation

Type: Dorr-Oliver-Long S-7
Size: Two 40'dia x 7' swd
Retention: 2.4 hours
Loading: Surface 400 gal/ft^2/day
Weir 4000 gal/ft/day

Outfall - to the Trent River

SECONDARY TREATMENT

Aeration Tanks

Type: Mechanical
Size: Three, each 55,000 gallons
Retention: 4 hours
Air Supply: Simon Carves, one aerator per tank

Secondary Sedimentation

Type: Dorr-Oliver-Long S-7
Size: Two 45' dia x 9' swd
Retention: 4.8 hours
Loading: Surface 330 gal/ft^2/day
Weir 3540 gal/ft/day

CHLORINATION

Type: Wallace & Tierman V800
Size: One 400

Chlorine Contact Chamber

Retention: 30 minutes

DIGESTION SYSTEM

Type: Single stage
Size: 30' dia x 25' swd

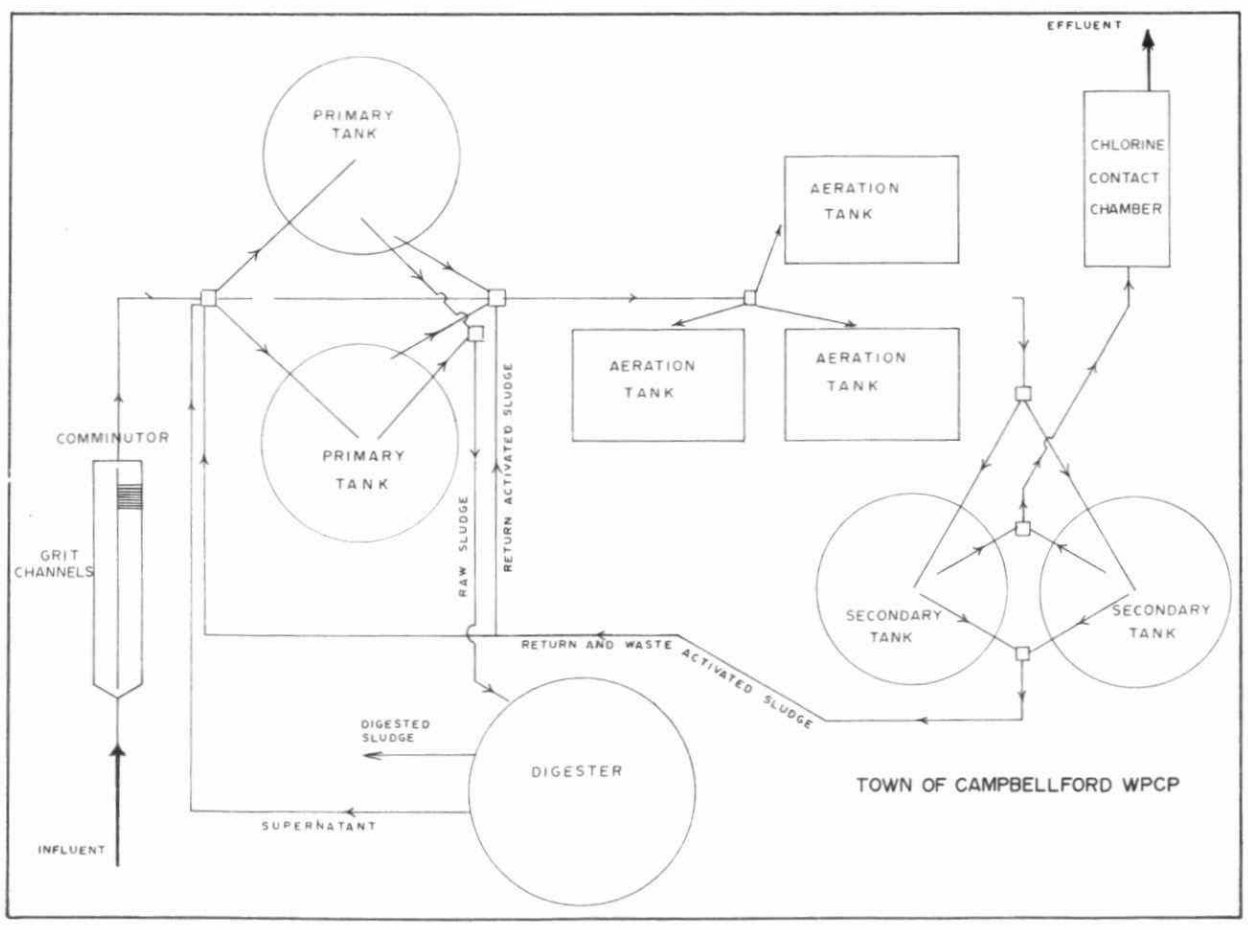
PUMPING STATION

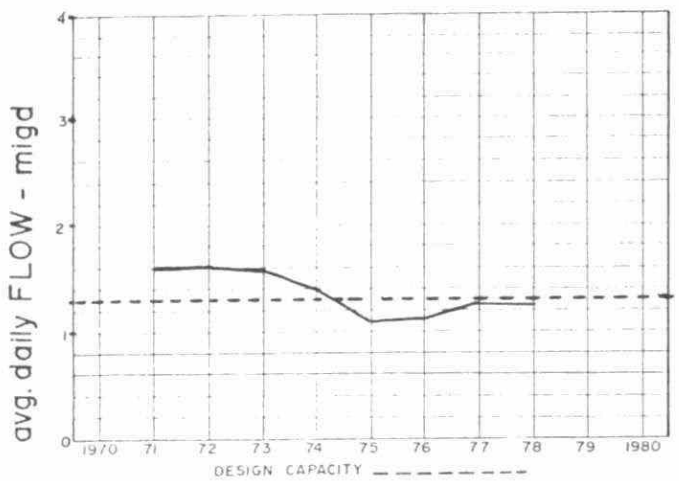
P.S. #1

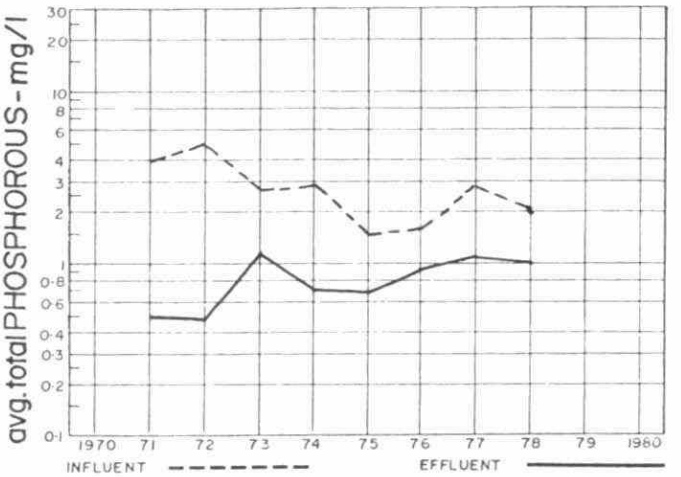
Three Crane Deming each 800 US gpm @ 38' tdh

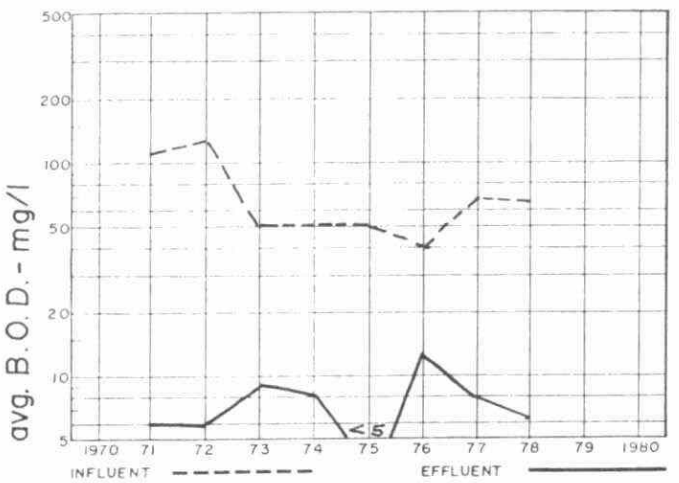
P.S. #2

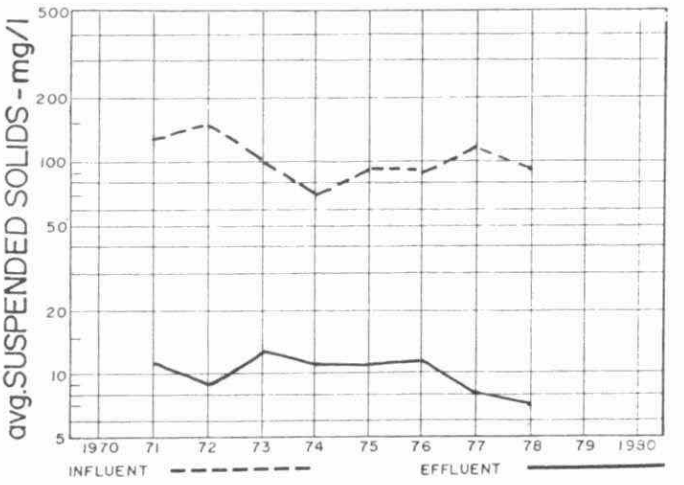
Two Flygt CP3100 each 400 US gpm @ 24' tdh











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000962 — CAMPBELLFORD WPCP

MUNICIPALITY : CAMPBELLFORD
REGION : 03 CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 3,411

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

* NO DATA AVAILABLE

DESIGN CAPACITY : 1.300 MIGD — DESIGN BOD5 : 140.0 MG/L — DESIGN SUSP.SOLIDS : 133.0 MG/L

<--- ** FLOW DATA --->					<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78 DEC/78																
JAN	45.770	1.480	1.910	2.200	130.0	11.0	91	54.4	79.0	7.0	91	32.9	2.0	.6	70	.6
FEB	33.730	1.200	1.660	2.000	83.0	8.0	90	25.2	73.0	13.0	82	20.2	2.3	1.0	56	.4
MAR	44.910	1.450	1.850	2.000	36.0	13.0	63	10.3	62.0	12.0	80	22.4	1.5	.7	53	.3
APR	53.820	1.790	1.960	2.300	*	*			56.0	12.0	78	23.6	*	*		
MAY	49.110	1.584	1.670	2.000	63.0	9.0	85	26.5	87.0	7.0	91	39.2	2.2	.7	68	.7
JUN	46.330	1.544	1.742	2.100	55.0	3.5	93	23.8	74.0	5.8	92	31.5	1.6	.8	50	.3
JUL	37.810	1.220	1.390	2.000	58.0	4.0	93	20.4	102.0	7.0	93	35.9	*	*		
AUG	36.540	1.179	1.410	2.000	75.0	4.5	94	25.7	80.0	5.0	93	27.4	2.8	2.7	3	
SEP	32.210	1.074	1.300	2.000	30.0	2.0	93	9.0	132.0	5.6	95	40.7	1.1	*		
OCT	30.670	.989	1.210	2.200	30.0	3.0	90	8.2	71.0	3.6	94	20.6	2.4	1.1	54	.3
NOV	29.430	.981	1.100	2.000	100.0	*			159.0	5.0	96	45.3	2.5	*		
DEC	30.790	.993	1.430	2.500	75.0	6.0	92	21.2	135.0	5.8	95	39.7	2.2	.8	63	.4
TOTAL	471.120							224.7				379.4				3.0
AVERAGE		1.290	MAXIMUM 1.960	MAXIMUM 2.500	66.8	6.4	90		92.5	7.4	92		2.0	1.0	49	
NO. OF SAMPLES					13	12			56	51			12	9		

MISSISSAUGA (LAKEVIEW)

SOUTH PEEL - LAKEVIEW WPCP

TYPE: CONVENTIONAL ACTIVATED SLUDGE

DESIGN FLOW 50.0 MIGD
DESIGN BOD 300 mg/l
DESIGN S.S. 350 mg/l

PRETREATMENT
- Grit Removal
Aerated tanks
Two 106' x 21' x 13.5'
Total vol. 375,000 gal.
Air supply 4.2 - 6 cfm

- Screening
Mechanical front cleaned screens
Two with 3/4" openings in 7' channels

PRIMARY SEDIMENTATION

Two 87' x 32' x 12'
Two 87' x 48' x 12'
Two 214' x 65' x 12'
Total vol: 3.12 MG
Detention Time: 2 hr.
Overflow rate 900 gpd/ft^2

SECONDARY TREATMENT
- Aeration Tanks
Diffused air; SPARGERS
Two 3-pass tanks, 144' x 63' x 14.3'
Two 3-pass tanks, 144' x 60' x 15'
Two 4-pass tanks, 216' x 80' x 14'
Total volume: 9.28 MG
Detention time: 5.9 hr.
Air supply: Three BROWN-BOVERI each 30,000 cfm

- Secondary Sedimentation
Four 87' x 32' x 12'
Two 104' x 48' x 12'
Four 140' x 79' x 12'
Total volume: 4.93 MG
Detention time: 3.2 hr.
Overflow rate: 575 gpd/ft^2

CHLORINATION

One F & P 2000 lb/day cap.
Three W & T 2000 lb/day cap.
Supply: rail tank cars.

SLUDGE HANDLING
- Primary Digesters
Fixed roof, mixed by gas recirculation
Three 100' dia. x 30.5' swd
Total volume 7.88000 ft^3 or 4.9 MG

- Secondary Digesters
Fixed concrete roof
One 100' dia x 30.5 swd
Volume: 262,000 ft^3 or 1.64 MG

- Holding Digesters
Fixed concrete roof
Two 80' dia x 25.5' swd
Total volume: 256,000 ft^3 or 1.60 MG

(NOTE: Two tanks 65' dia x 25' swd not in use)

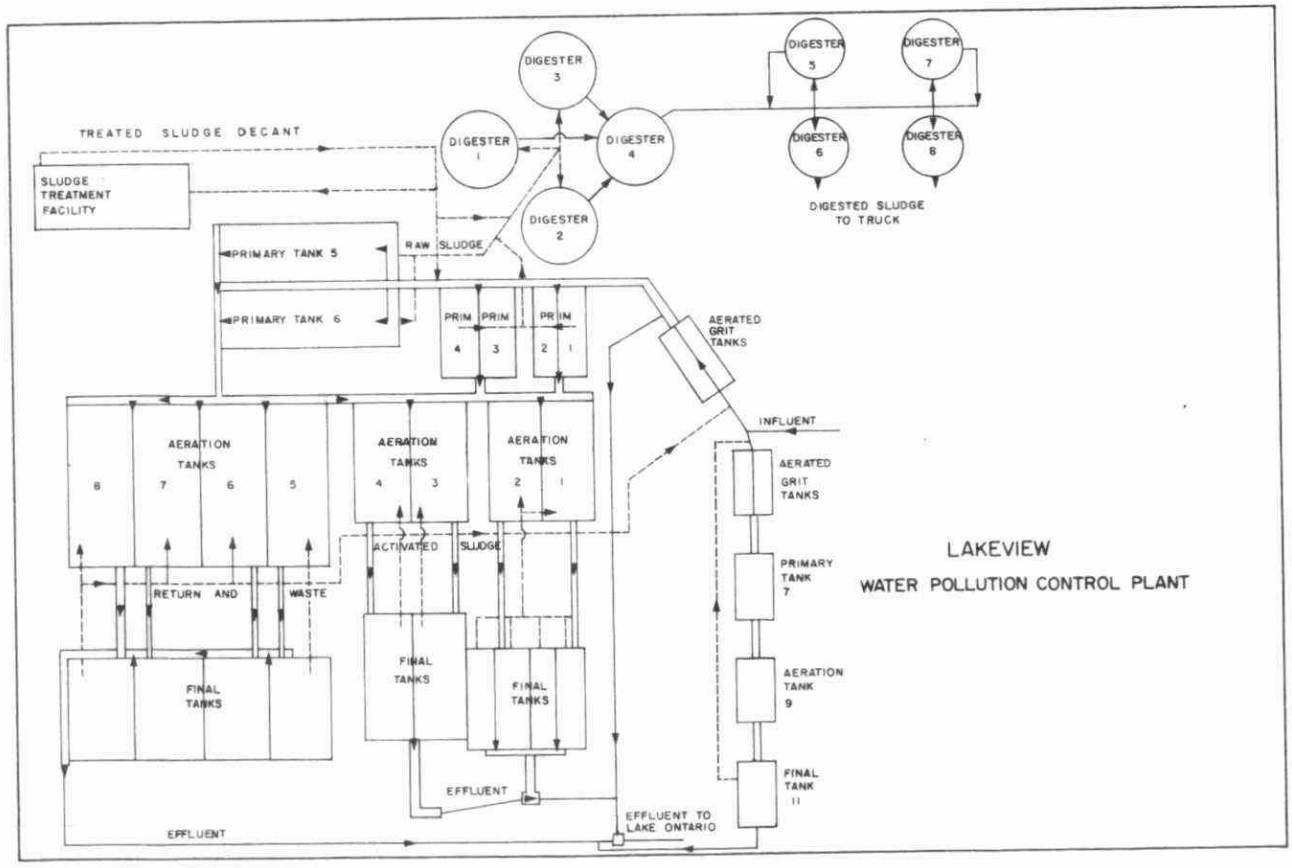
PLANT III
TYPE: CONVENTIONAL ACTIVATED SLUDGE

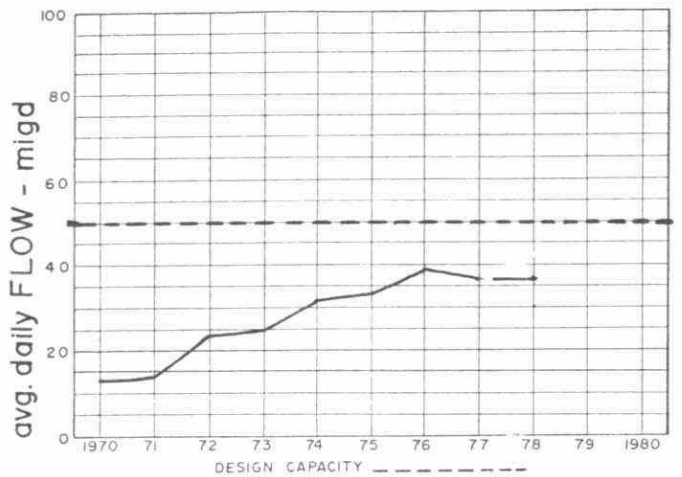
DESIGN FLOW 12.5 MIGD
DESIGN BOD 300 mg/l
DESIGN S.S 350 mg/l

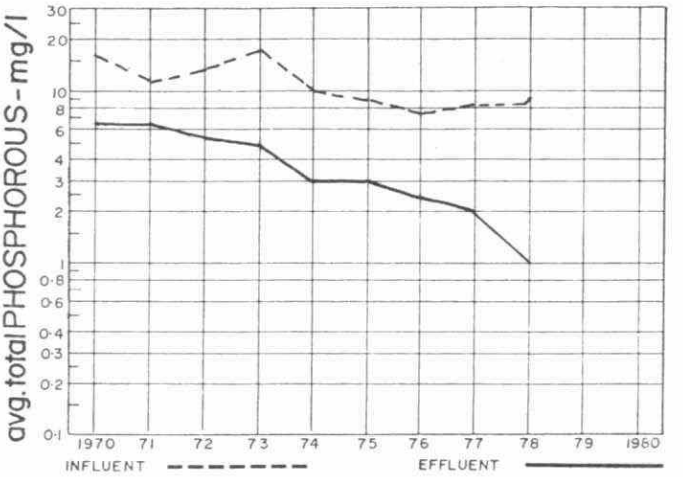
PRETREATMENT
-Grit Removal
Aerated Tanks
Two 90' x 21' x 13.0'
Detention 8.68 min.
Air Supply 4 - 6 cfm.
-Screening
Mechanical front cleaned screens
Two with 3/4" openings in 7' channels.

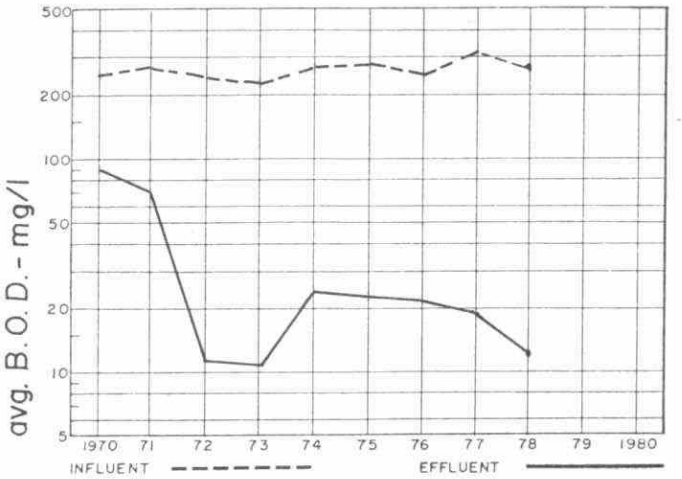
PRIMARY SEDIMENTATION
One 214' x 65' x 12'
Total Volume: 1.04 MG
Detention time: 2 hr.
Overflow rate: 900 gpd/ft^2

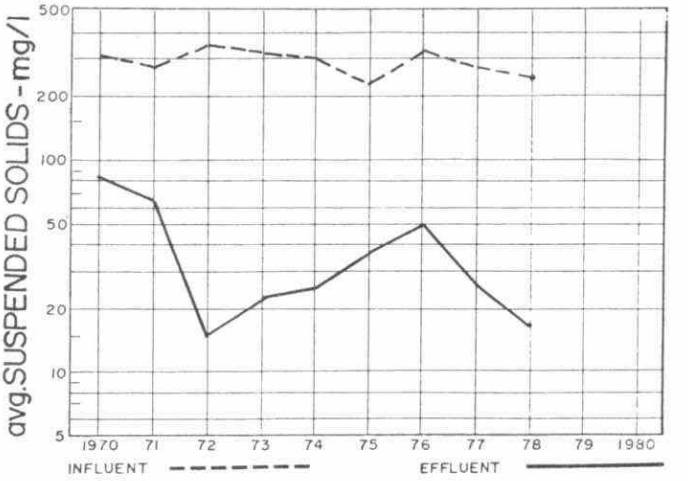
SECONDARY TREATMENT
-Aeration Tanks
Diffused air; SPARJERS
One 4-pass tank, 432' x 20' x 15'
Total Volume: 3.23 MG
Detention time: 4.67 hr.
Air supply: Two Brown-Boveri each 33,000 cfm.
- Secondary Sedimentation
One 12.16' x 78.75' x 260'
Total volume: 1.56 MG
Detention time: 3 hr.
Overflow rate: 610 gpd/ft^2











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001284 — LAKEVIEW W P C P

MUNICIPALITY : MISSISSAUGA LAKEVIEW
REGION : 03 CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 273,467

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 50.000 MIGD — DESIGN BOD5 : 300.0 MG/L — DESIGN SUSP.SOLIDS : 350.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1178.300	38.000	56.700	80.800	271.0	17.3	93	2989.3	287.0	24.7	91	3090.6	5.6	.9	82	54.5
FEB	986.800	35.220	40.100	64.700	240.0	19.5	91	2175.8	220.0	15.0	93	2022.9	6.6	.8	87	57.2
MAR	1333.000	43.100	59.500	79.200	210.0	24.7	88	2470.0	230.0	34.0	85	2612.6	6.6	1.4	78	69.3
APR	1316.200	43.840	61.020	78.600	133.0	9.5	92	1625.5	182.0	7.8	95	2292.8	6.0	.9	85	67.1
MAY	1165.600	38.853	46.810	66.100	166.0	8.0	95	1841.6	170.0	13.0	92	1829.9	6.9	.5	92	74.5
JUN	1068.000	35.620	40.443	60.500	231.0	9.5	95	2365.6	270.0	6.3	97	2816.3	9.8	.7	92	96.6
JUL	969.900	30.939	36.503	54.800	494.0	8.1	98	4712.7	310.0	14.3	95	2867.9	12.7	.9	92	114.4
AUG	1024.300	33.000	37.916	50.400	316.0	12.3	96	3110.7	378.0	12.0	96	3748.9	13.6	1.4	89	124.9
SEP	1116.000	37.200	56.396	81.700	385.0	10.0	97	4185.0	230.0	20.0	91	2343.6	8.0	1.0	87	78.1
OCT	1098.000	35.400	44.186	56.900	362.0	7.0	98	3897.9	242.0	12.0	95	2525.4	8.2	1.0	87	79.0
NOV	1023.600	34.120	40.652	60.000	425.0	13.0	96	4217.2	305.0	18.0	94	2937.7	9.2	1.3	85	80.8
DEC	1081.700	34.800	48.500	80.000	345.0	22.0	93	3493.8	268.0	25.0	90	2628.5	9.8	1.3	86	91.9
TOTAL	13361.400							37085.1				31717.1				988.3
AVERAGE		36.674	MAXIMUM 61.020	MAXIMUM 81.700	298.1	13.4	95		257.6	16.8	93		8.5	1.0	88	
NO. OF SAMPLES					134	92			135	91			43	62		

Ministry of the Environment
Ontario

Southeastern Region

④

REGIONAL OFFICE

KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES

Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

PEMBROKE
OTTAWA
CORNWALL
KINGSTON
BELLEVILLE
Lake Ontario

BELLEVILLE

PROJECT NO. 1-0004-66
PROJECT City of Belleville WPCP
TREATMENT Activated Sludge

DESIGN FLOW 8.0 mgd

DESIGN POPULATION 52,000

BOD - Raw Sewage 130 mg/l
- Removal 88%

SS - Raw Sewage 175 mg/l
- Removal 91%

PUMPING STATIONS

a) Plant site @ 35' tdh

One Worthington 2500 gpm (electric)
One Worthington 1666 gpm (electric)
One Worthing ton 2500 gpm (electric and diesel)

b) Front Street

One Worthington 2500 gpm (electric @ 55' tdh)
One Worthington 1666 gpm (electric @ 55' tdh)
One Worthington 3332 gpm (diesel and electric @ 55' tdh)
One Fairbanks Morse 4400 gpm (diesel @ 42' tdh)

c) Dundas Street West

One Worthington 416 gpm (electric @ 29' tdh)
One Worthington 1300 gpm (diesel @ 40' tdh)

PRIMARY TREATMENT

Grit Removal

Type: Aerated grit tank with grab bucket
Size: Two 24' x 24' x 12½' (52,400 gal)
Retention: 9.4 minutes
Air Supply: Two Roots blowers 610 scfm each
Two Aerzener Rotary 350 scfm each

Screening

Type: Mechanically cleaned
Size: 2" opening

Comminution

Type: Two Chicago Pump barminutor Model C-36

Primary Sedimentation

Type: Falk
Size: Four 70' x 36' x 12' (752,000 gal total)
Retention: 2.3 hours
Loading: Surface; 795 gal/ft^2/day
Weir; 14,700 gal/ft/day

SLUDGE HANDLING

Digestion System

Type: Two stage

Primary:
Type: Gas mixed
Size: Two 45' dia. x 27' swd (79,400 ft^3 total)

Secondary:
Type: Non mixed
Size: One 55' dia. x 27' swd (59,400 ft^3 total)

SECONDARY TREATMENT

Aeration Tanks

Type: Three, 3-pass each pass 60' x 20' x 12' awd (Volume 809,000 gal total)

Retention: 2.4 hours

Air Supply

Type: Aerzen Maschinen fabric
Size: Three 2280 scfm @ 7 psi

Diffusers

Type: Sparjers - 5/16"
Spacing: 4 inch centers

Secondary Sedimentation

Type: Falk
Size: Three 83' x 56.5' x 12' (2 pass) (1,070,000 gal total)
Retention: 3 hours
Loading: Surface 800 gal/ft^2/day
Weir 13,000 gal/ft/day

CHLORINATION

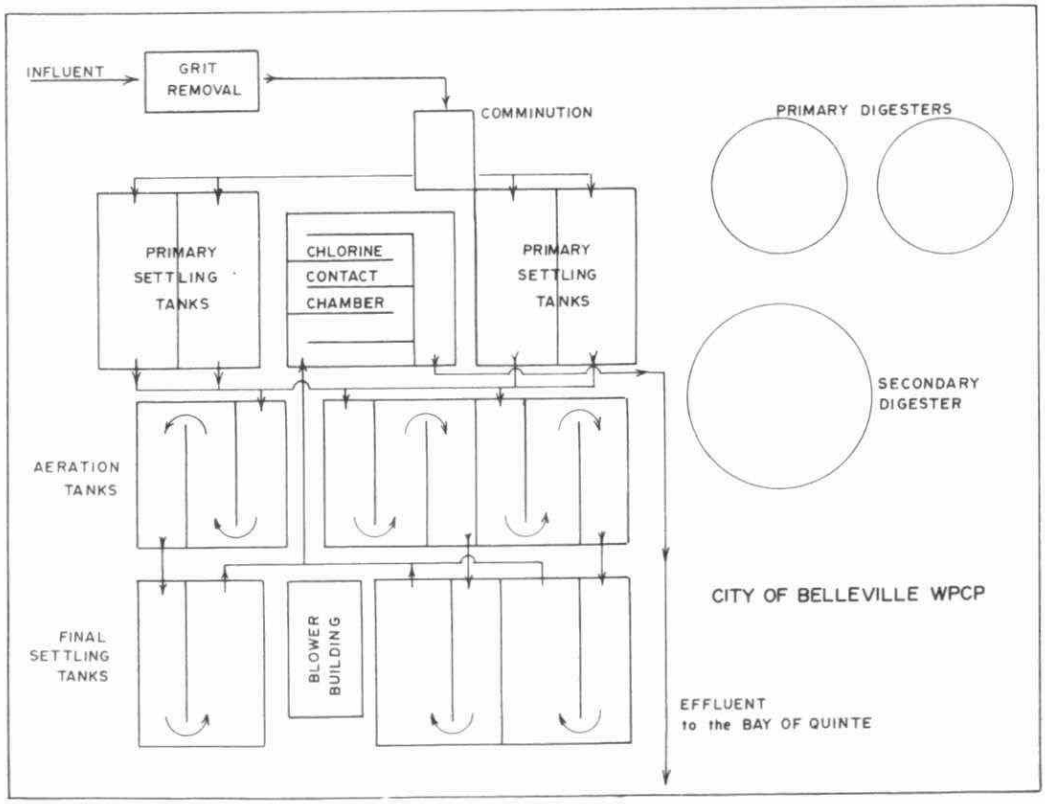
Type: Fischer & Porter
Size: One 1,000 lb/day
One 1,500 lb/day

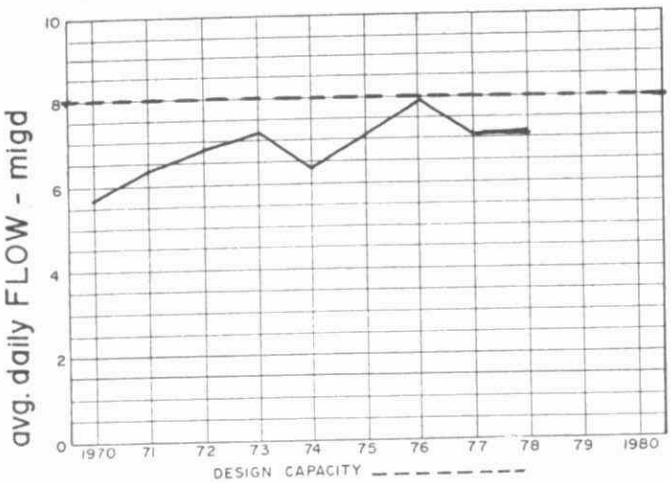
Chlorine Contact Chamber

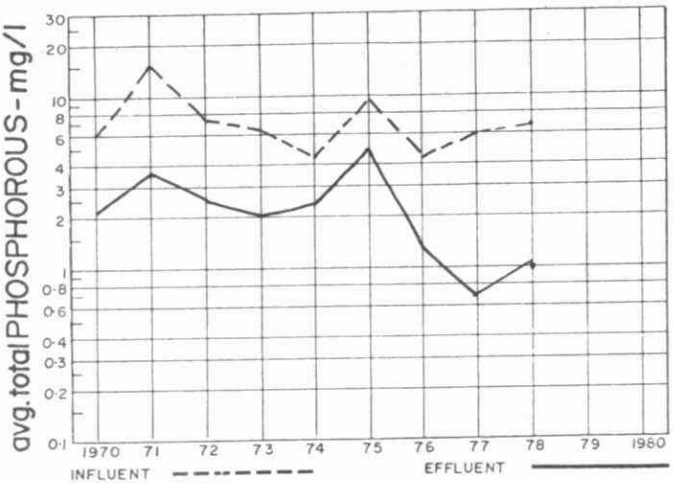
Size: 54.7' x 60' x 11' (167,000 gal)
Retention: 30 minutes

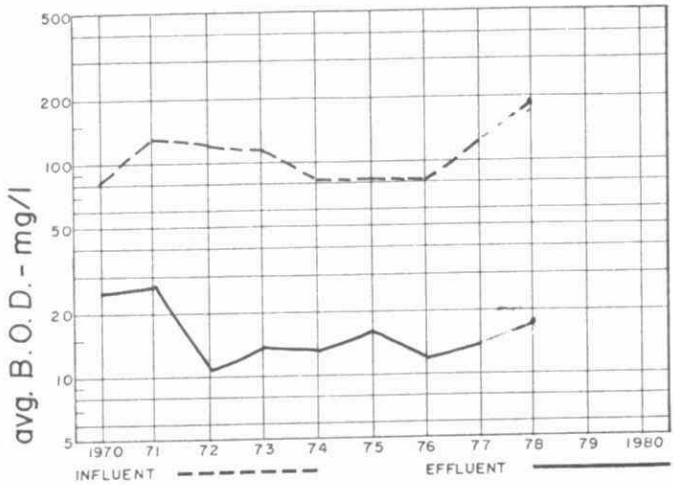
Outfall

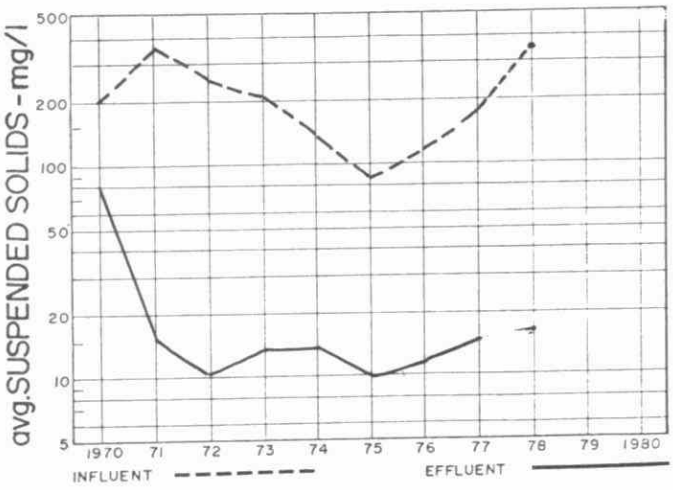
Approx. 280' of 48" dia. concrete pipe and 1179' of 36" dia. concrete pipe to Bay of Quinte











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000016 — BELLEVILLE WPCP

MUNICIPALITY : BELLEVILLE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 34,822

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 8.000 MIGD — DESIGN BOD5 : 130.0 MG/L — DESIGN SUSP.SOLIDS : 175.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->								
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	345.070	11.131	17.990	20.000	104.0	19.3	81	292.2	125.0	24.8	80	345.7	3.4	*		
FEB	227.550	8.370	11.720	12.500	88.0	15.0	82	166.1	120.0	24.0	80	218.4	1.9	*		
MAR	366.640	11.830	18.620	22.000	127.0	10.0	92	428.9	201.0	14.4	92	684.1	5.4	.7	87	17.2
APR	363.570	12.119	19.930	21.000	115.0	19.0	83	349.0	128.0	18.0	85	399.9	3.4	.6	82	10.1
MAY	211.190	6.813	8.820	12.000	90.0	8.0	91	173.1	158.0	11.0	93	310.4	4.4	.8	81	7.6
JUN	149.140	4.971	5.850	8.000	123.0	12.0	90	165.5	280.0	11.0	96	401.1	6.2	.8	87	8.0
JUL	138.280	4.460	5.490	11.000	187.0	10.0	94	244.7	328.0	14.0	95	434.1	8.2	.8	90	10.2
AUG	156.360	5.044	5.900	13.000	283.0	20.0	92	411.2	640.0	13.0	97	980.3	8.2	1.7	79	10.1
SEP	149.180	4.973	7.150	11.000	279.0	17.0	93	390.8	567.0	23.0	95	811.5	7.9	1.9	75	8.9
OCT	150.140	5.000	10.000	7.400	299.0	18.9	93	420.5	1045.0	17.7	98	1542.3	16.2	*		
NOV	138.030	4.601	8.450	15.000	280.0	23.1	91	354.5	438.0	13.0	97	586.6	11.3	*		
DEC	163.500	5.279	6.830	11.500	310.0	19.2	93	475.4	370.0	18.2	95	575.1	7.2	*		
TOTAL	2558.650							3871.9				7289.5				72.1
AVERAGE		7.049	MAXIMUM 19.930	MAXIMUM 22.000	190.4	15.9	91		366.6	16.8	95		6.9	1.0	85	
NO. OF SAMPLES					145	143			133	131			127	77		

KINGSTON

PROJECT: Kingston Twp WPCP

PROJECT NO: 2-0284-70

TREATMENT: Conventional Activated Sludge

DESIGN FLOW: 2.45 MIGD

BOD - Raw Sewage - 238 mg/l
- Removal - 92%

PRIMARY TREATMENT

COMMINUTOR
Type: Two, C-18 barminutors
Capacity: (each) 3.3 MIGD

SEWAGE LIFT PUMPING
Type: Two, Weinman 6-UH
Size: (each) 1000 IGPM @ 35' TDH

Type: One, Arthur-Leitch 8 SEA
Size: 970 IGPM @ 32' TDH

AERATED GRIT TANK
Type: rectangular
Size: 15' x 14' x 10' swd
Volume: 13,100 I.G.
Retention: 7.8 min

PRIMARY TANKS
Type: Two, rectangular
Size: 12' x 46' x 7.6' swd
Volume: (total) 52100 I.G.
Surface Settling Rate: 730 IGPD/ft (@ 0.81 MIGD
Retention: 1.55 hr at 0.81 MIGD

Type: Two, rectangular
Size: 20' x 60' x 11.25' swd
Volume: (total) 168,000 I.G.
Retention: 2.5 hr @ 1.62 MIGD
Surface Settling Rate: 675 IGPD/ft @ 1.62 MIGD

RAW SLUDGE PUMPS
Type: Two, plunger type
Size: (each) 200 IGPM

Type: One, Chicago Pumps SF-44
Size: 100 usgpm @ 100' TDH

SECONDARY TREATMENT

AERATION TANKS
Type: Two, rectangular
Size: (each) 22.5' x 61.6' x 15' swd
Volume: (total) 26,000 I.G.
Retention: 7.7 hr @ 0.81 MIGD
Aerators: Chicago Pump discfusers

Type: Two, square
Size: (each) 41' x 41' x 15'
Volume: (total) 312,000 I.G.
Retention: 4.6 hr @ 1.62 MIGD
Aerators: 1 mechanical 40 HP per tank

RETURN SLUDGE PUMPS
Type: Two, Crane 6 x 6 SPL horizontal
Size: each 565 igpm @ 30' TDH

Type: Two, Weinman UH-B horizontal
Size: (each) 350 usgpm @ 25' TDH

FINAL SETTLING TANKS
Type: Two, rectangular
Size: (each) 12' x 56' x 9.75' swd
Volume: (total) 81,700 I.G.
Retention: 2.4 hr @ 0.81 MIGD
Surface Settling Rate:
- 600 IGPD/ft^2 @ 0.81 MIGD

Type: Two, rectangular
Size: (each) 20' x 67.5' x 12' swd
Volume: (total) 202,000 I.G.
Retention: 3.0 hr at 1.62 MIGD
Surface Settling Rate:
- 600 IGPD/ft^2 @ 1.62 MIGD

SLUDGE DIGESTION

Type: Two-stage anaerobic

PRIMARY DIGESTER
Type: One, circular
Size: 55' dia x 20' swd
Volume: 54,500 ft^3

SECONDARY DIGESTER
Type: One, circular
Size: 55' dia x 20' swd
Volume: 54,500 ft^3

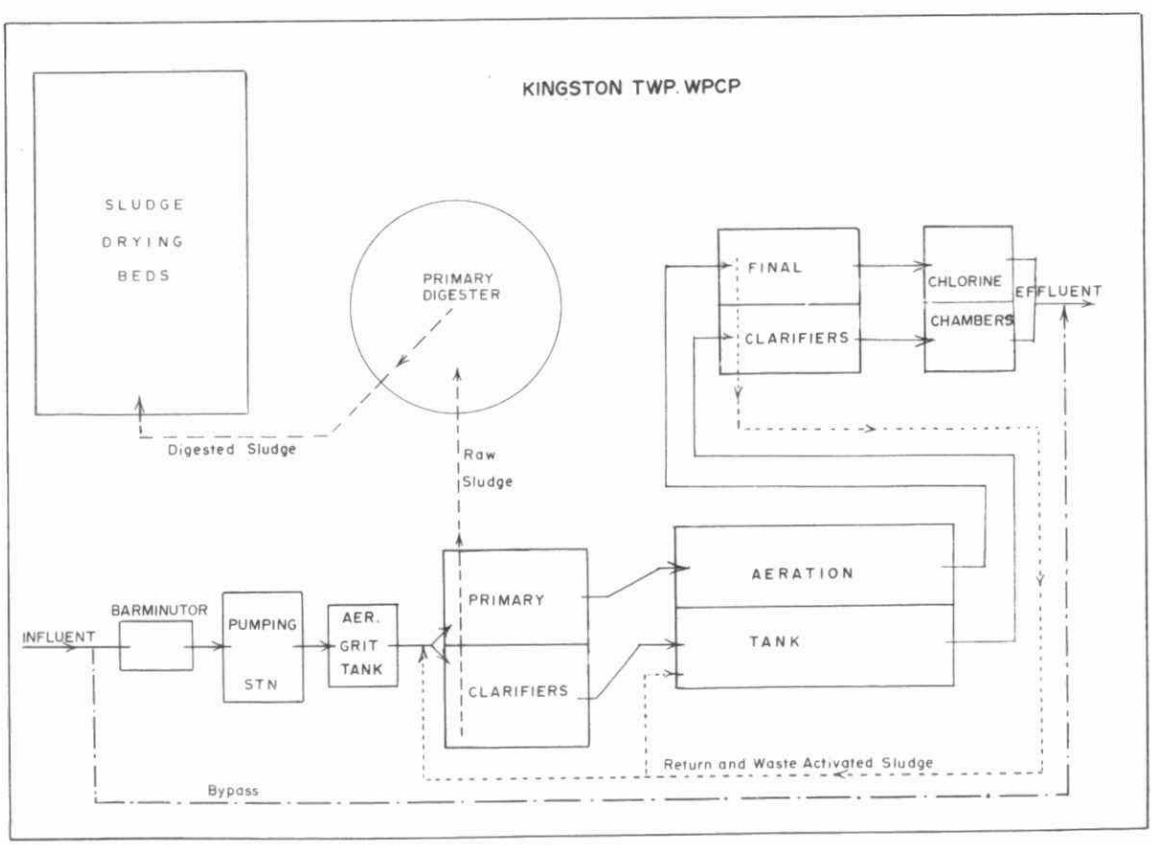
SLUDGE DRYING BEDS rectangular
Type: four, concrete-walled
Size: (each) 20' x 80'
Area: (total) 6400 ft^2

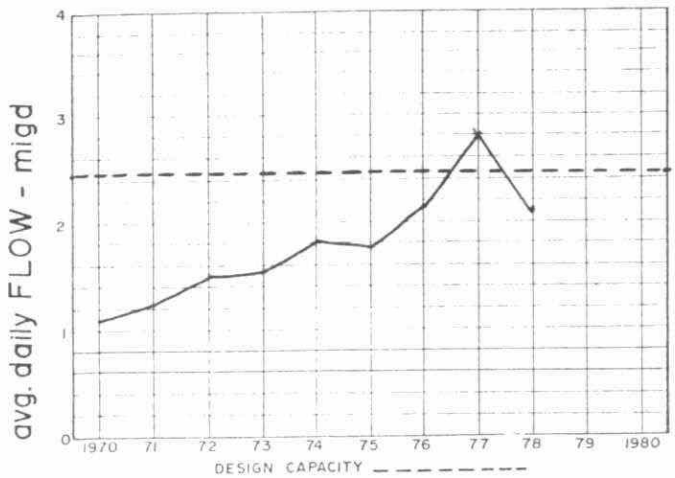
CHLORINATION

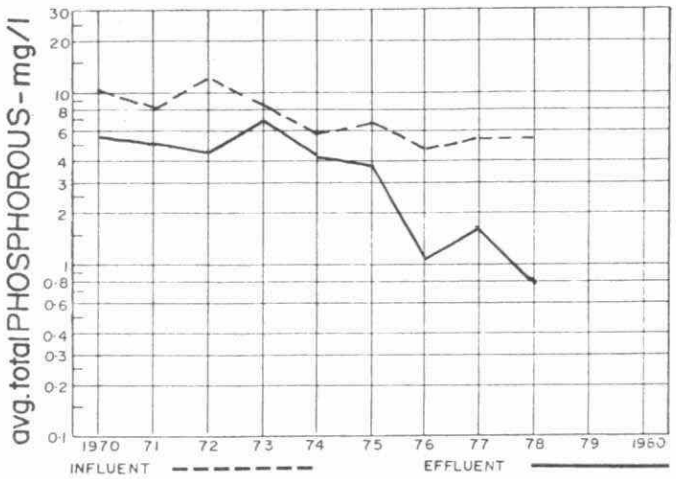
CHLORINE CONTACT TANKS
Type: One, rectangular
Size: 9' x 27.7' x 7' swd
Volume: 10,900 I.G.
Retention: 20 min @ 0.81 MIGD

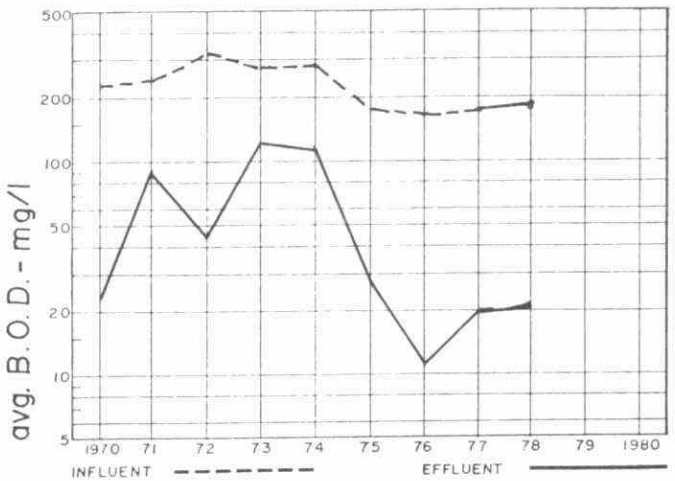
Type: One, rectangular
Size: 13.5' x 41' x 10' swd
Volume: 34,600 I.G.
Retention: 31 min @ 1.62 MIGD

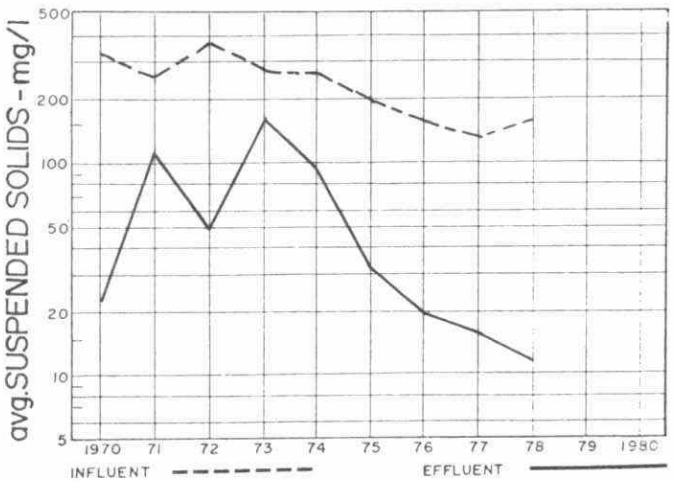
CHLORINATOR
Type: Wallace and Tiernan A-731
Capacity: (max) 400 lb/day











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000365 KINGSTON TWP WPCP

MUNICIPALITY : KINGSTON TWP
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

CURRENT POPULATION : 25,820

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 2.450 MIGD DESIGN BOD5 : 238.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	73.495	2.371	4.447	5.830	184.0	32.0	82	111.7	125.0	17.0	86	79.3	5.2	1.3	75	2.8
FEB	51.923	1.854	2.469	4.700	193.0	35.0	81	82.0	126.0	11.0	91	59.7	5.7	1.2	78	2.3
MAR	91.700	2.958	4.531	5.180	138.0	37.0	73	92.6	91.0	16.0	82	68.7	4.2	.8	80	3.1
APR	92.925	3.098	4.865	5.450	156.0	27.0	82	119.8	104.0	15.0	85	82.7	4.8	.9	81	3.6
MAY	62.153	2.005	2.636	5.700	188.0	24.0	87	101.9	155.0	16.0	89	86.3	5.0	1.3	74	2.3
JUN	53.220	1.774	2.010	3.800	207.0	12.3	94	103.6	191.0	15.4	91	93.4	6.1	.9	85	2.7
JUL	49.971	1.612	1.906	4.030	203.0	13.0	93	94.9	248.0	11.0	95	118.4	5.6	.7	87	2.4
AUG	55.320	1.785	2.801	5.070	163.0	18.0	88	80.2	173.0	12.4	92	88.8	5.2	.7	86	2.4
SEP	58.685	1.956	2.958	5.100	178.0	11.8	93	97.5	182.0	10.5	94	100.6	6.3	.8	87	3.2
OCT	57.113	1.842	2.656	5.650	223.0	18.0	91	117.0	187.0	13.1	92	99.3	7.6	.9	88	3.8
NOV	67.172	2.239	4.048	6.250	212.0	7.9	96	137.0	205.0	10.5	94	130.6	8.0	.6	92	4.9
DEC	75.887	2.448	4.187	5.700	138.0	14.1	89	94.0	167.0	12.9	92	116.9	5.3	.6	88	3.5
TOTAL	789.564							1232.2				1124.7				37.0
AVERAGE		2.162	MAXIMUM 4.865	MAXIMUM 6.250	181.9	20.8	88		162.8	13.4	91		5.7	.8	84	
NO. OF SAMPLES					69	126			70	130			91	185		

SIDNEY (BATAWA)

PROJECT Sidney Twp. WPCP

PROJECT NO. 2-0121-62

TREATMENT Activated Sludge

DESIGN FLOW 0.12 mgd

DESIGN POPULATION 1,500

BOD - Raw Sewage 220 mg/l
- Removal 90%

SS - Raw Sewage 250 mg/l
- Removal 90%

PRIMARY TREATMENT

Grit Removal

Type: Channels, manually cleaned
Size: Two 9' 3" x 9" x 6" swd
Flow Velocity: 0.6 fps
Retention: 16.6 sec

Comminution

- One Chicago Pump, Model 10A

Screening

One $1\frac{1}{2}$" c-c on comminutor bypass
One $1\frac{1}{2}$" c-c on plant bypass

Primary Sedimentation

Size: One 16' x 16' x 11' swd
(9,130 gal)
Retention: 1.83 hr
Loading: Surface, 468 gal/ft^2/day
Weir, 3750 gal/ft/day

SECONDARY TREATMENT

Type: Diffused air; three-pass
Size: One 30' x 20' x 10' swd
(37,400 gal)
Retention: 7.5 hr

Diffusers: Ceramic Tubes

Spacing: 9 per pass (2 passes)
12 per pass (1 pass)

(15,000 gal)
Retention: 3.0 hr
Loading: Surface, 500 gal/ft^2/day
Weir, 5000 gal/ft/day

CHLORINATION

Type: Advance
Size: 50 lb/day

Chlorine Contact Chamber

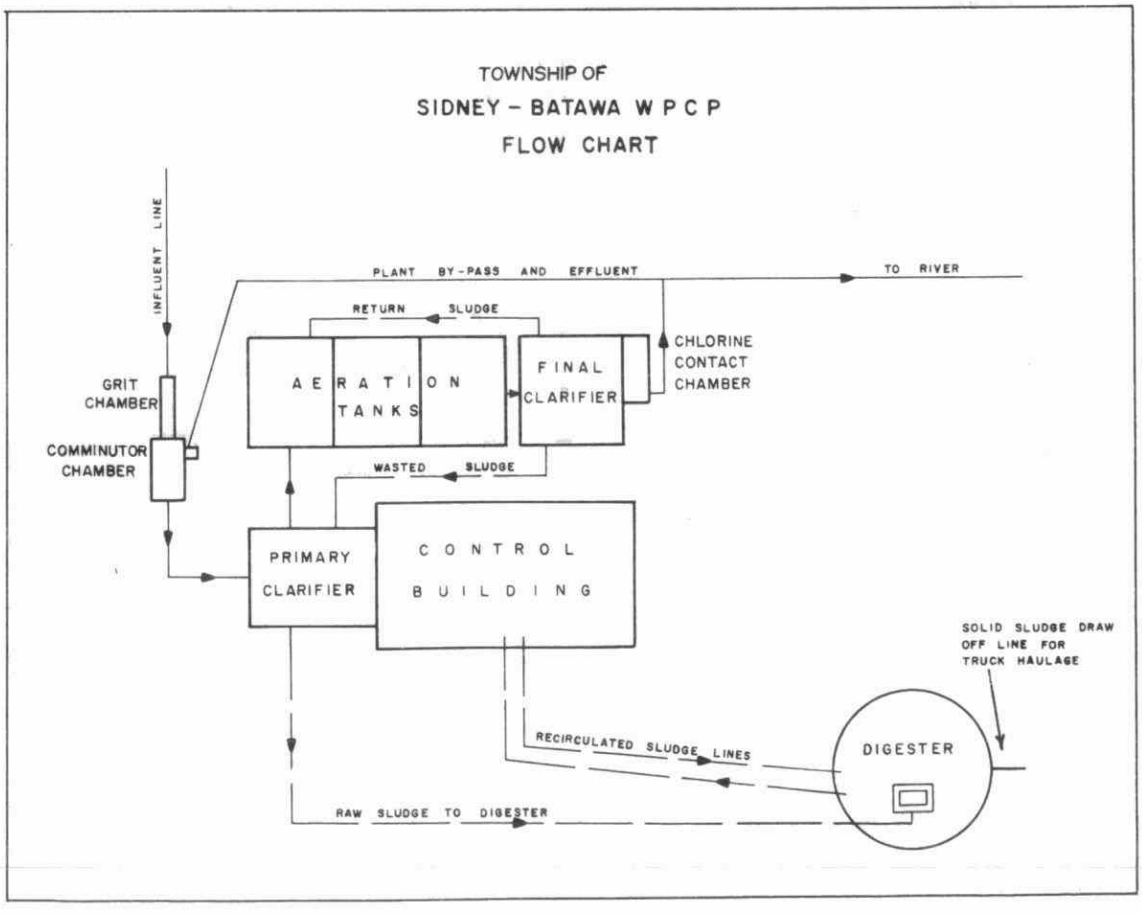
Size: One 10' x 4' x 8' (2,000 gal)
Retention: 24 min

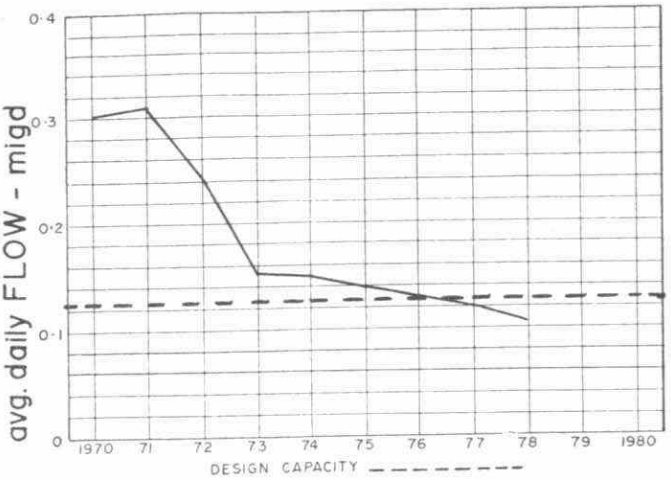
OUTFALL

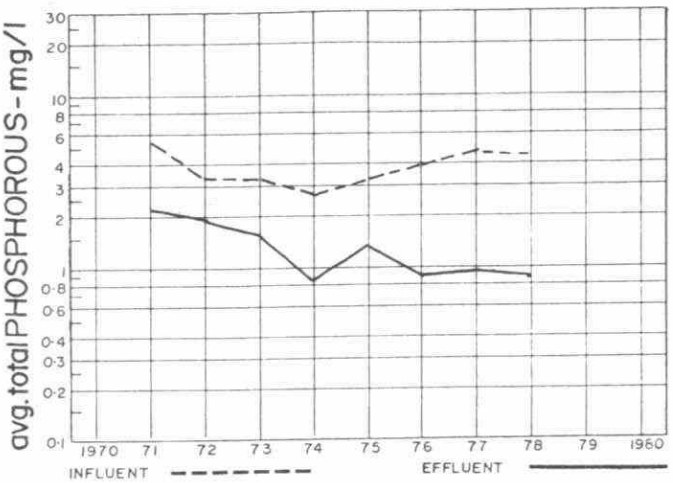
- to Trent River

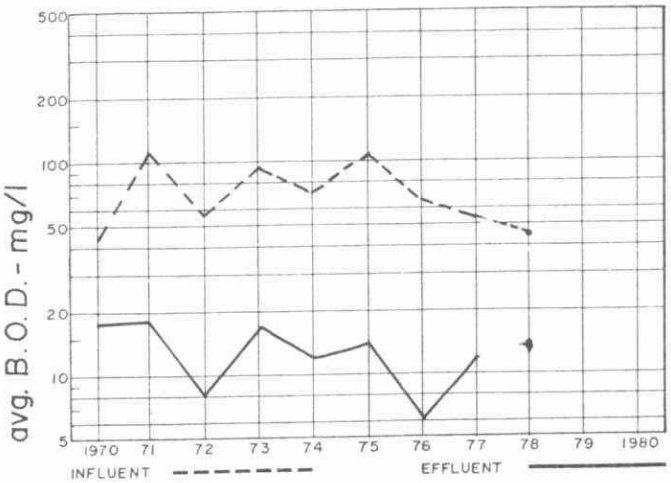
SLUDGE HANDLING

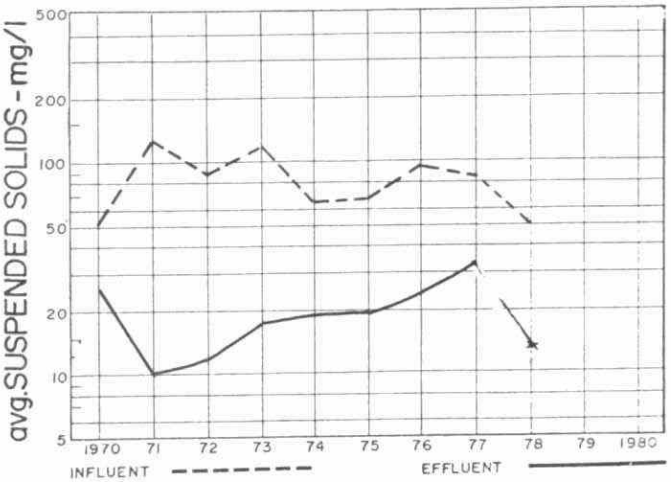
Type: Fixed cover, integral heat exchanger coils
Size: One 20' dia x 17' 4"
(6,000 cu ft or 37,500 gal)
Loading: 1.5 lb/cu ft/mo











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000668 BATAWA WPCP

MUNICIPALITY : SIDNEY TWP
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 15,821

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.125 MIGD DESIGN BOD5 : 220.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.500	.170	.290	.360	22.0	4.0	81	.9	45.0	7.0	84	2.0	5.0	*		
FEB	2.070	.050	.110	.150	33.0	15.0	54	.3	52.0	12.5	75	.8	3.3	.9	72	
MAR	6.720	.210	.310	.380	27.0	17.0	37	.6	25.0	19.0	24	.4	3.5	*		
APR	7.540	.250	1.000	.370	22.0	13.0	40	.6	19.0	16.5	13	.1	3.9	*		
MAY	4.140	.130	.230	.270	20.0	16.0	20	.1	50.0	13.0	74	1.5	4.5	*		
JUN	2.610	.090	.010	.018	52.0	36.5	29	.4	67.0	25.5	61	1.0	4.8	1.0	79	
JUL	2.410	.070	.110		32.0	22.0	31	.2	44.0	5.9	86	.9	5.0	.8	84	.1
AUG	2.260	.070	.110	.300	62.0	3.5	94	1.3	38.0	7.3	80	.6	4.6	1.0	78	
SEP	2.440	.080	.210	.350	30.0	6.5	78	.5	67.0	7.8	88	1.4	4.1	*		
OCT	1.930	.060	.070	.110	107.0	2.7	97	2.0	60.0	6.8	88	1.0	4.3	*		
NOV	3.300	.110	.260		104.0	14.0	86	2.9	102.0	12.7	87	2.9	4.7	*		
DEC	5.880	.189	.300		18.0	17.5	2		60.0	7.3	87	3.0	3.2	*		
TOTAL	46.800							9.8				15.6				.1
AVERAGE		.123	MAXIMUM 1.000	MAXIMUM .380	44.0	13.9	68		52.4	11.7	77		4.2	.9	78	
NO. OF SAMPLES					21	28			63	62			99	39		

TRENTON

PROJECT Town of Trenton WPCP

PROJECT NO. 1-0210-69

DESIGN FLOW 3.5 MIGD

TREATMENT Conventional Activated Sludge.

DESIGN BOD. 250 mg/l

DESIGN SS 300 mg/l

PUMPING STATIONS

Dundas St. 3 pumps operating at 1150 RPM equipped with 150 Hp motors supplying 4.5 MIGD @ 109' TDH. Standby diesel generator 125 kW @ 156.25 kVA

Bay St. 2 pumps operating at 1150 RPM equipped with 60 Hp motors supplying 1.8 MIGD @ 100' TDH. Standby diesel generator 125 kW @ 156.25 kVA.

PRIMARY TREATMENT

Screening - 2.36" barminutor units.

Grit Removal

One aerated grit tank 51'x15.75x11' deep @ DWF.

Primary Clarifiers

- Two rectangular tanks, each 78'x32'x12' SWD @ 700 IGPD/ft^2.
- Sludge collection by chain flight longitudinal & cross collectors.
- Three plunger-type raw sludge and sludge transfer pumps, each rated at 100 IGPM @ 80' TDH with 7½ Hp motors.
- Scum collector flights at the surface.
- Two torque flow scum pumps rated at 50IGPM @ 60' TDH with 10 Hp, 1800 RPM motors.

Vortex Chambers

- One V.C. to bypass 2.5 DWF to chlorine contact tank after primary clarifier.
- Two V.C.'s to transfer 2 DWF from aeration tanks to final clarification tanks.

SECONDARY TREATMENT

Aeration Tanks

Two aeration tanks 132'x32'x15' deep with two passes in each tank. 4.15 hours detention @ DWF plus 30% return sludge.

Blower Equipment

- Four 2800 CFM centrifugal units for the aeration tanks and channel aeration 200 Hp 3600 RPM motors.
- Two 130 CFM positive displacement units for the grit tank. 10 Hp 1200 RPM motors.

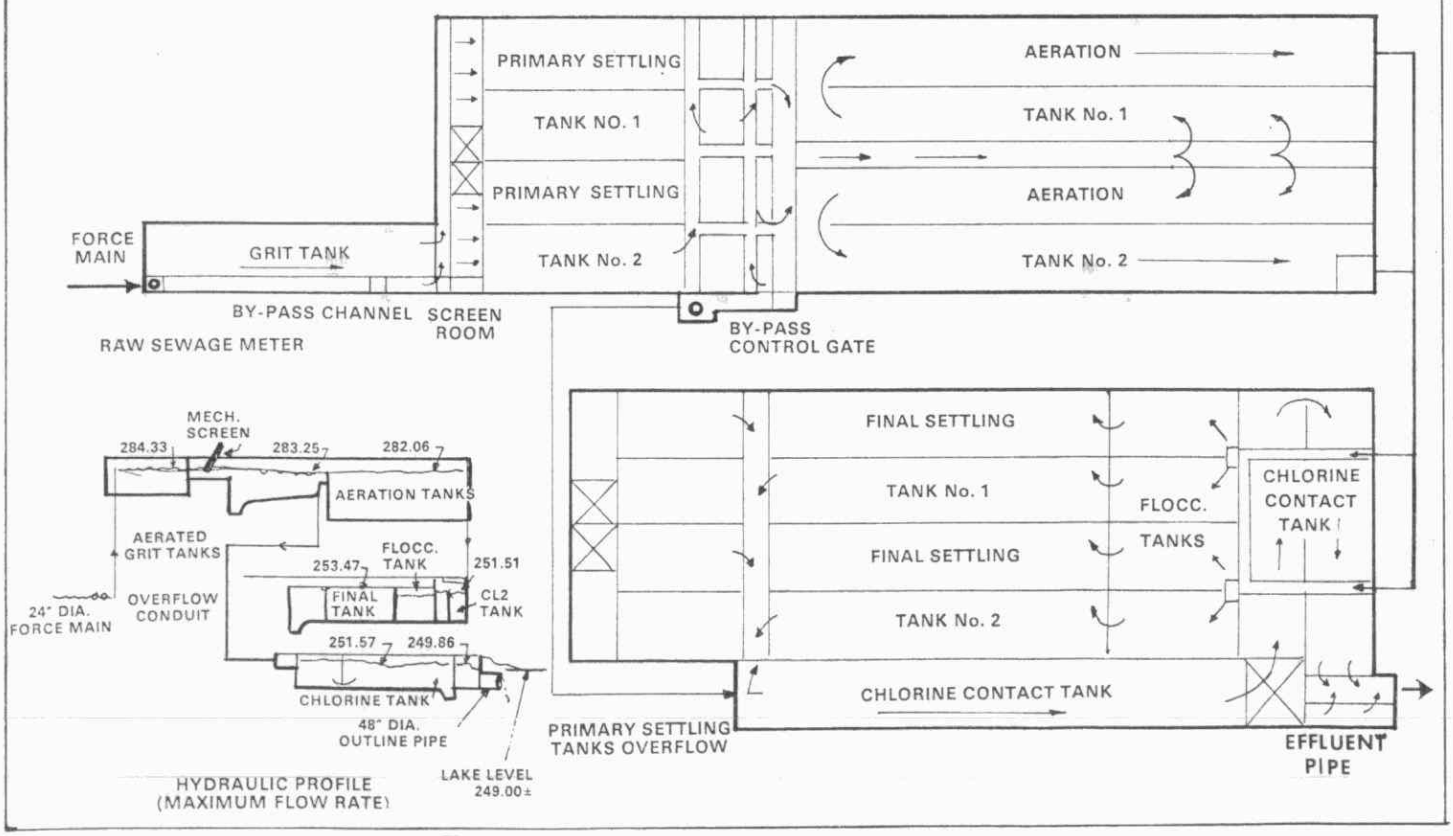
Final Clarifiers

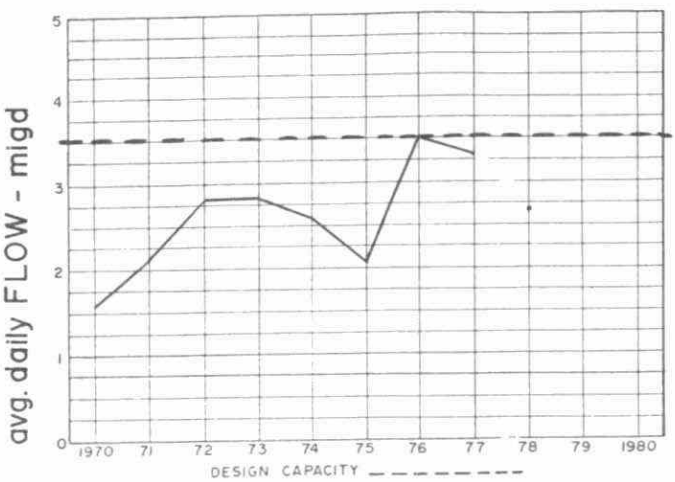
- Two rectangular tanks 136'x32'x12' SWD @ 800 IGPD/ft^2. Sludge collection by chain flight longitudinal and cross collectors.
- Two horizontal non-clog return activated sludge pumps each rated @2430 GPM @ 58' TDH driven by 60 Hp 1200 RPM motors.

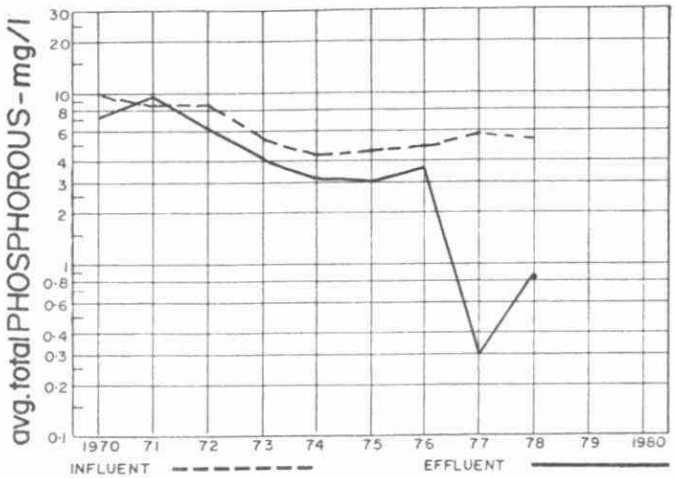
Chlorine Contact Chamber

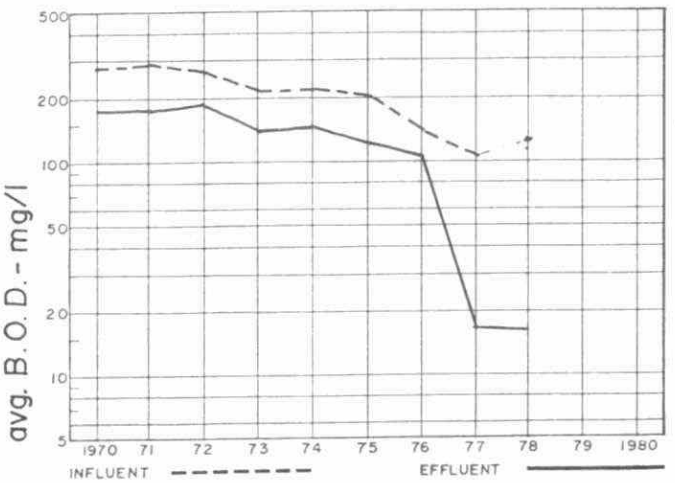
- Two gas chlorinators, 1000 lb/day for influent, effluent and return activated sludge. 87min. detention.
- Scum and sludge collection by travelling bridge on first pass of contact chamber.
- Two sludge and scum torque flow pumps rated at 50 GPM @ 80' TDH driven by 15 Hp 1800 RPM motors.

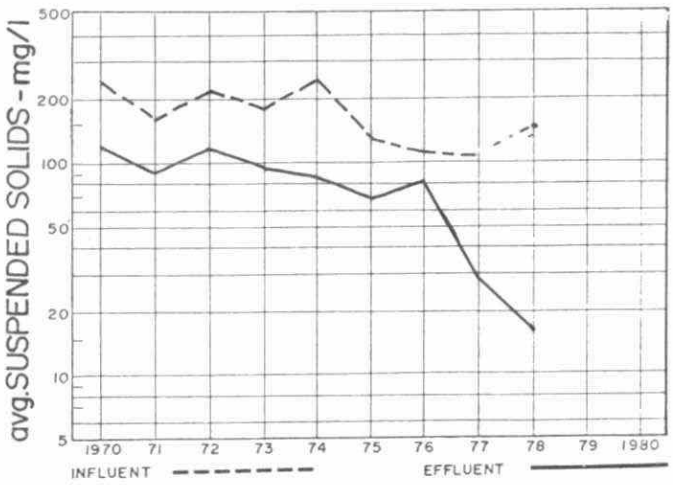
TRENTON WATER POLLUTION CONTROL PLANT











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000775 — TRENTON WPCP

MUNICIPALITY : TRENTON
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 14,784

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 3.500 MIGD — DESIGN BOD5 : 250.0 MG/L — DESIGN SUSP. SOLIDS : 300.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	110.000	3.540	4.780	8.200	110.0	9.0	91	111.1	142.0	26.0	81	127.6	6.8	*		
FEB	81.040	2.890	3.180	4.300	80.0	17.5	78	50.6	137.0	9.0	93	103.7	6.8	*		
MAR	140.230	4.520	7.110	8.000	64.0	20.0	68	61.7	63.0	*			5.6	*		
APR	133.840	4.460	6.600	11.000	89.0	15.0	83	99.0	82.0	15.0	81	89.6	4.8	1.4	70	4.5
MAY	94.070	3.030	5.330	5.100	75.0	37.0	50	35.7	82.0	21.3	74	57.1	6.3	2.5	60	3.5
JUN	70.180	2.340	3.300	4.000	170.0	32.0	81	96.8	132.0	27.0	79	73.6	6.1	*		
JUL	52.210	1.680	2.300	4.000	152.0	10.7	92	73.7	163.0	13.7	91	77.9	4.8	.4	91	2.2
AUG	56.470	1.820	2.880	6.000	142.0	13.0	90	72.8	140.0	16.4	88	69.7	6.6	.6	90	3.3
SEP	59.630	1.990	2.480	4.000	90.0	24.0	73	39.3	226.0	12.0	94	127.6	7.6	.1	98	4.4
OCT	59.980	1.920	2.350	4.100	164.0	7.3	95	93.9	232.0	18.9	91	127.8	7.0	*		
NOV	67.080	2.240	3.580	9.900	156.0	8.6	94	98.8	242.0	9.4	96	156.0	5.5	.3	94	3.4
DEC	68.670	2.220	3.590	10.500	195.0	9.6	95	127.3	133.0	8.2	93	85.7	4.0	.9	77	2.1
TOTAL	993.400							960.7				1096.3				23.4
AVERAGE		2.721	MAXIMUM 7.110	MAXIMUM 11.000	123.9	16.9	86		147.8	16.0	89		5.9	.8	85	
NO. OF SAMPLES					33	32			244	219			126	22		

Ministry of the Environment
Ontario

Northeastern Region
⑤

REGIONAL OFFICE

SUDBURY
199 Larch St.
705-675-4501

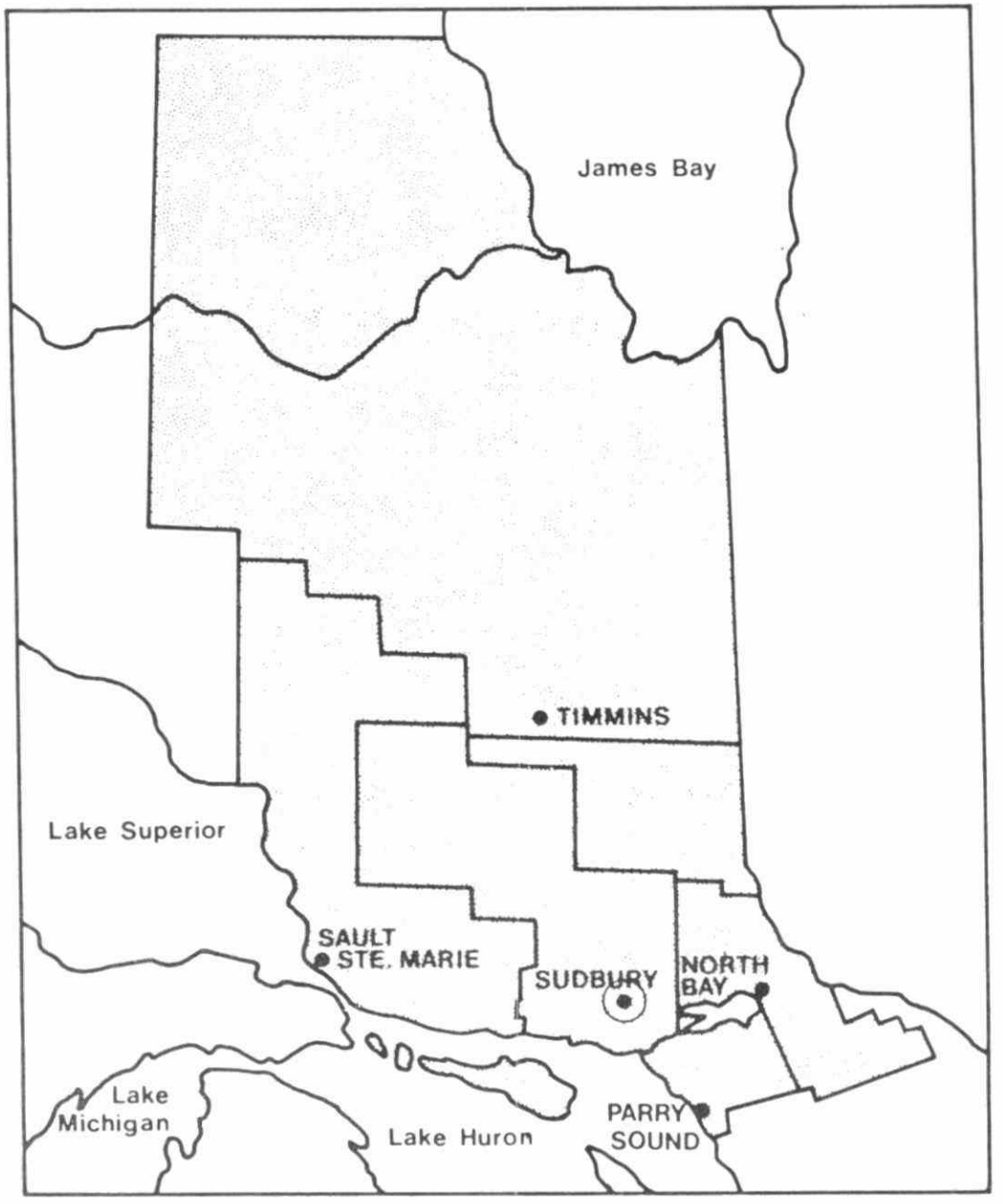
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

NORTH BAY

PROJECT: City of North Bay WPCP

PROJECT NUMBER:

TREATMENT: Activated Sludge

DESIGN FLOW: 8.0 mgd

BOD - Raw Sewage 150 mg/l
- Removal 85%

PRIMARY TREATMENT

GRIT REMOVAL
Type: Aerated grit tanks
Size: two, (each) 48' x 16' x 13' awl
(each: 62,300 I.G.)
Retention: (each) 22.4 min

SCREENS
Type: two, Mechanical

SEWAGE LIFT PUMPS
Type: WORTHINGTON
Two, variable-speed
One, constant-speed
Size: (total) 16 mgd

PRIMARY SEDIMENTATION
Type: Four, 90' x 30' x 11'
(741,300 I.G. total)
Retention: 2.2 hr

SECONDARY TREATMENT

AERATION TANKS
Type: Diffused Air, two-pass
Size: Two, 185' x 20' x 12' per pass
(1,108,000 I.G. total)
Retention: 3.3 hr

RETURN SLUDGE PUMPS
Type: WORTHINGTON
Size: Two, 550 gpm

SECONDARY SEDIMENTATION
Type: WALKER RSX
Size: Four, 60' x 60' x 11'
(988,400 I.G. total)
Retention: 3.0 hr
Loading: Surface-550 gal/ft^2/day
Weir - 8,000 gal/ft/day

CHLORINATION
Type: four-pass
Size: two, 39' x 7.8' x 6.5' each pass
(98,700 I.G. total)
Retention: 18 min.

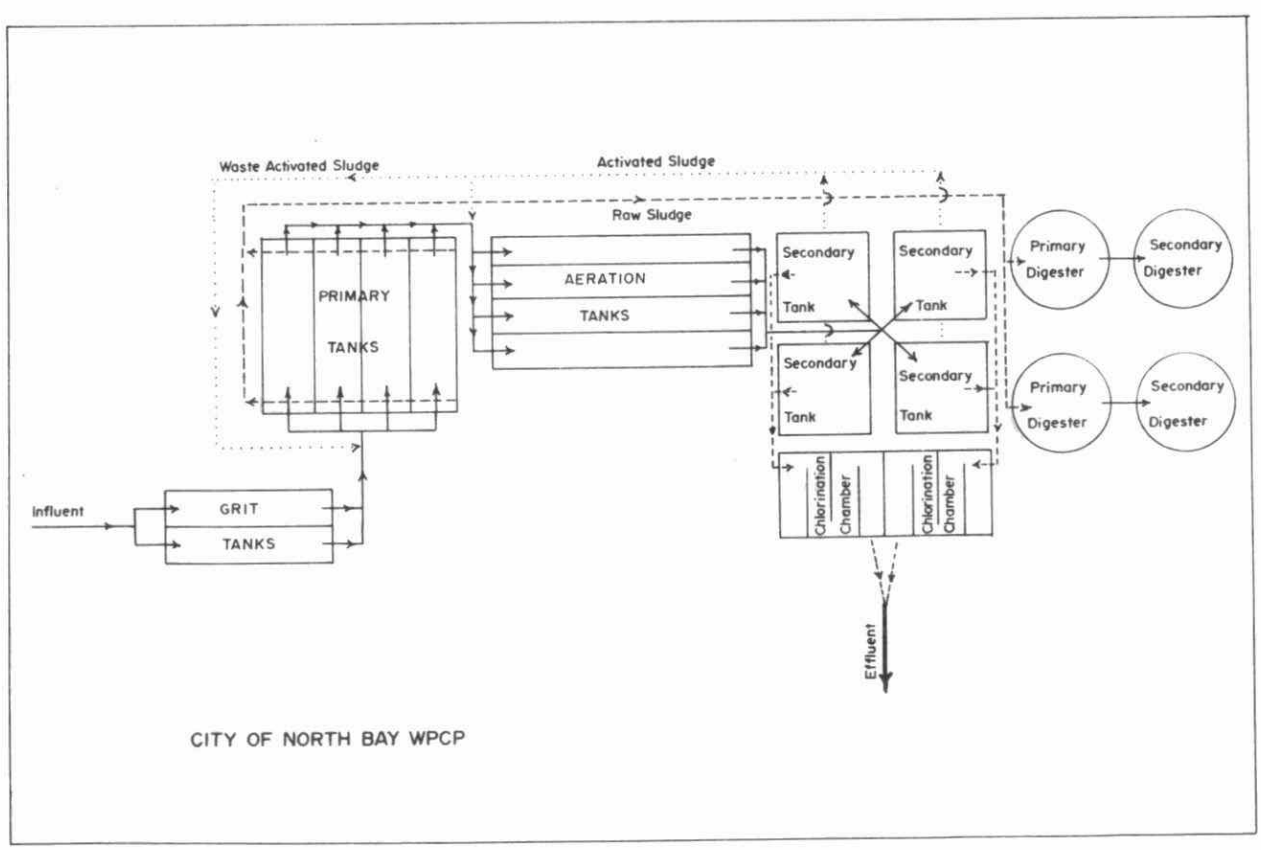
OUTFALL
-1115 ft into Lake Nippissing

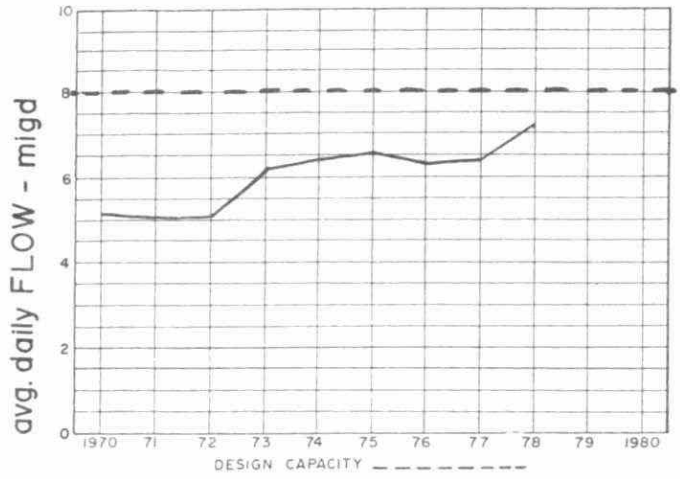
SLUDGE HANDLING

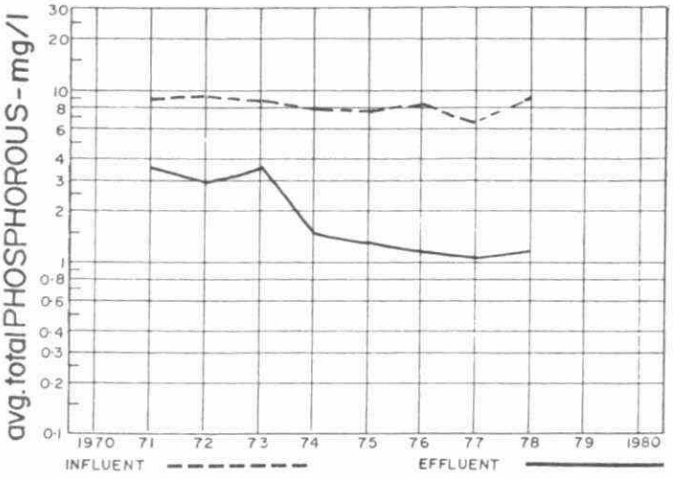
DIGESTION SYSTEM
Type: Two-Stage

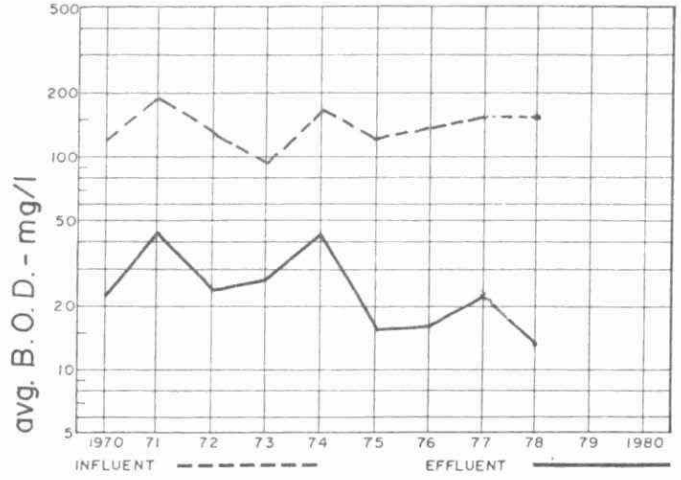
Primary --
Type: DORR
Size: Two, 65' dia x 22' swd
(911,000 I.G. total)

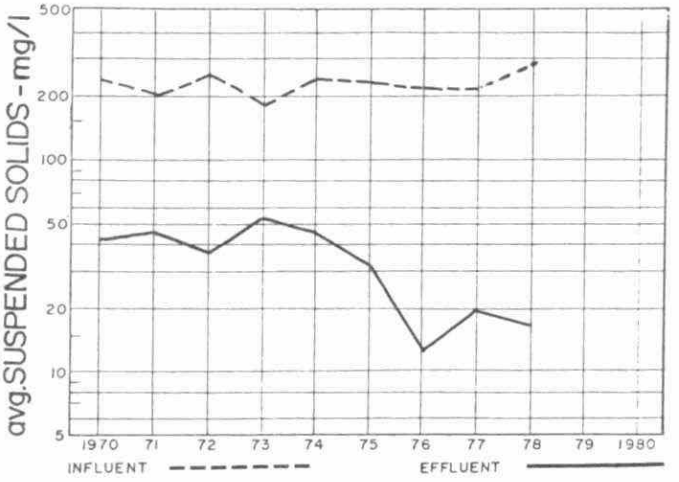
Secondary --
Size: Two, 65' dia x 22' swd
(911,000 I.G. total)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000533 — NORTH BAY WPCP

MUNICIPALITY : NORTH BAY
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY PHOSPHORUS REMOVAL

CURRENT POPULATION : 50,417

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 8.000 MIGD — DESIGN BOD5 : 150.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	183.200	5.900	6.500	10.000	163.0	12.0	92	276.6	303.0	18.0	94	522.1	7.3	1.0	86	11.5
FEB	157.900	5.600	6.900	8.000	182.0	10.0	94	271.5	304.0	15.0	95	456.3	8.3	1.3	84	11.0
MAR	179.100	5.800	6.600	8.400	213.0	18.0	91	349.2	323.0	18.0	94	546.2	7.9	1.5	81	11.4
APR	305.600	10.200	13.500	16.400	127.0	9.4	92	359.3	240.0	15.4	93	686.3	8.3	.7	90	23.0
MAY	235.600	7.600	9.300	12.000	117.0	12.9	88	245.2	218.0	10.9	95	487.9	8.4	1.2	85	16.9
JUN	200.100	6.670	8.200	14.400	129.0	6.9	94	244.3	285.0	10.8	96	548.6	10.4	1.0	90	18.8
JUL	209.630	6.800	9.050	18.000	120.0	14.0	88	222.2	378.0	11.6	96	768.0	9.4	1.6	82	16.3
AUG	234.130	7.550	11.500	21.600	143.0	16.3	88	296.6	488.0	22.8	95	1089.1	7.6	1.2	84	14.9
SEP	272.500	9.100	15.290	24.000	133.0	26.7	79	289.6	258.0	33.5	87	611.7	10.1	1.5	85	23.4
OCT	258.590	8.340	12.000	16.000	133.0	8.5	93	321.9	203.0	14.9	92	486.4	8.8	1.0	88	20.1
NOV	224.770	7.490	12.200	13.000	141.0	8.2	94	298.4	212.0	11.1	94	451.5	9.3			
DEC	170.930	5.500	6.650	7.800	192.0	14.5	92	303.4	284.0	21.5	92	448.6	12.6	1.1	91	19.6
TOTAL	2632.050							3478.2				7102.7				186.9
AVERAGE		7.213	MAXIMUM 15.290	MAXIMUM 24.000	149.4	13.1	91		291.3	16.9	94		9.0	1.1	86	
NO. OF SAMPLES					47	47			236	234			85	77		

STURGEON FALLS

Project Town of Sturgeon Falls WPCP
Project No: 1-0012-66
Treatment: Conventional Activated Sludge
Design Flow: 1 MGD
BOD: Raw Sewage 180 mg/l
SS: Raw Sewage 200 mg/l

PUMPING STATIONS:
Two, prefabricated, each with 1250 IGPM pump
One, built in place, 375 IGPM pump.
One, built in place, 1040 IGPM pump.

PRETREATMENT

DETRITOR:
One, 12' dia. x 1.6' awd
Volume: 1100 I. Gal Detention: 1.6 min.

COMMINUTOR:
Capacity: 4 MGD

BAR SCREENS:
in channel, after comminutor

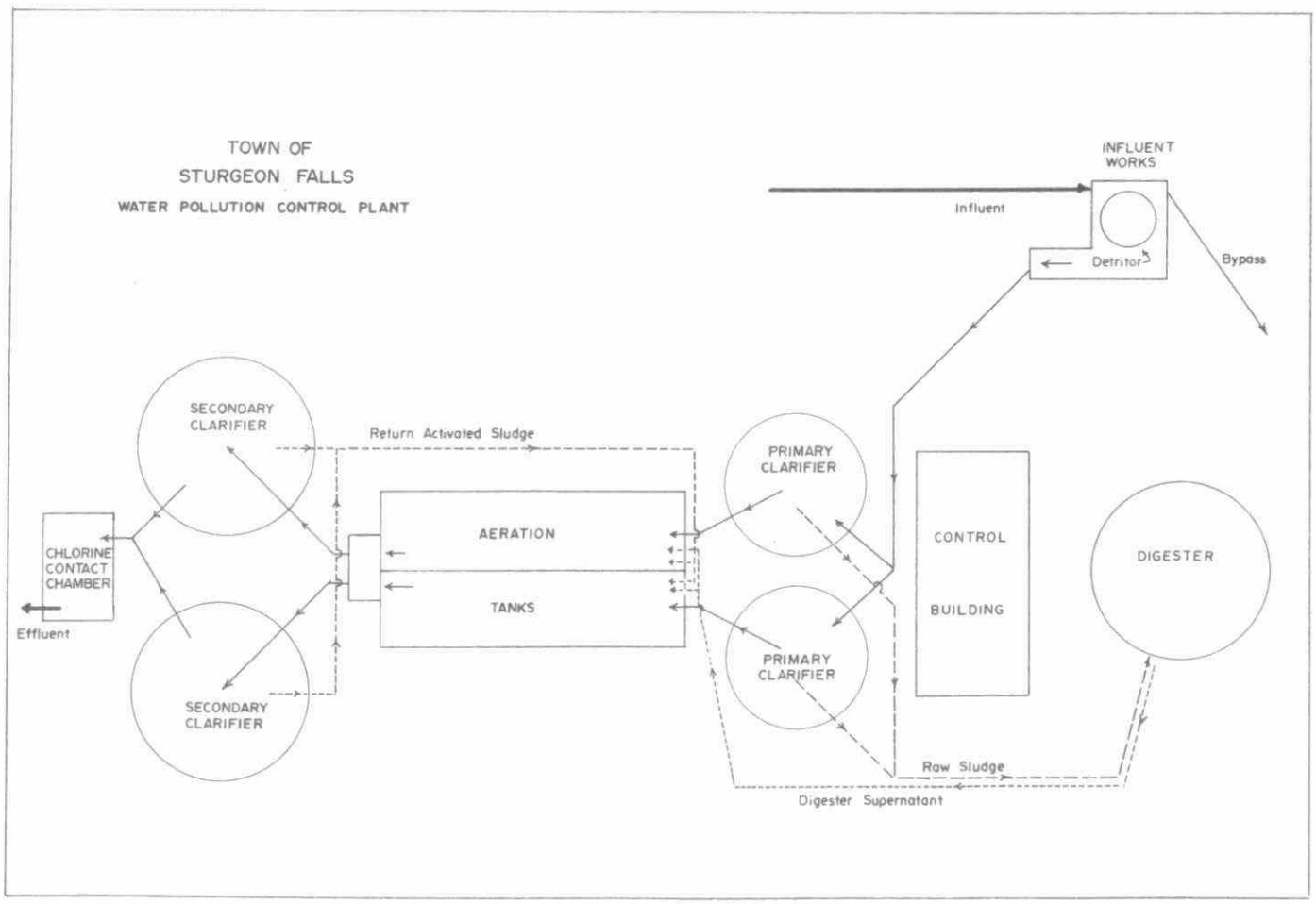
PRIMARY CLARIFIERS:
Two, 36' dia. x 10' swd
Volume: (total) 127,000 I. Gal.
Detention: 3.0 hours
Overflow rate: 490 I. Gal/ft^2/day

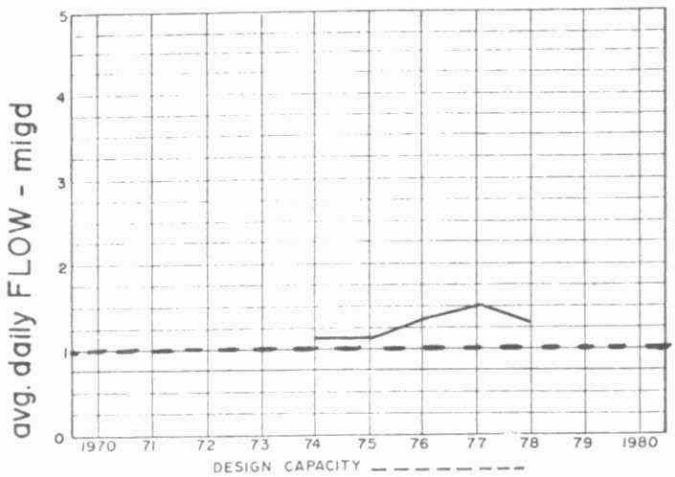
AERATION TANKS:
Two, 42' x 18' x 14' swd
Volume: (total) 132,000 I. Gal.
Detention: 3.2 hours
Blowers: two, each 4320 cfm

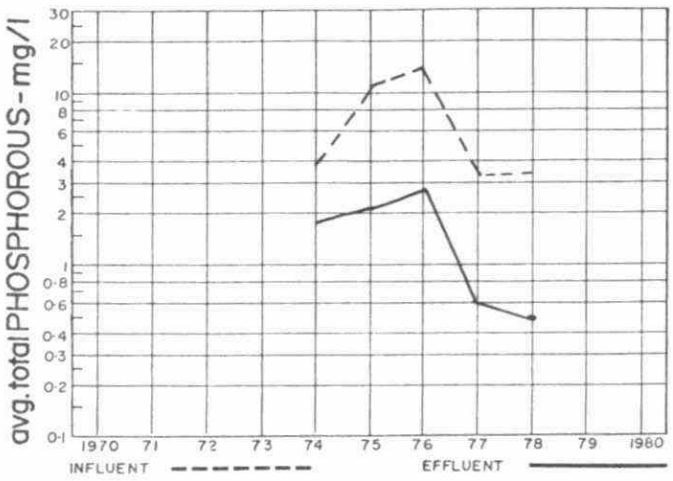
SECONDARY CLARIFIERS:
Two, 36' dia. x 10' swd
Volume: (total) 127,000 I. gal.
Detention: 3.0 hours
Surface overflow rate: 490 gal/ft^2/day.

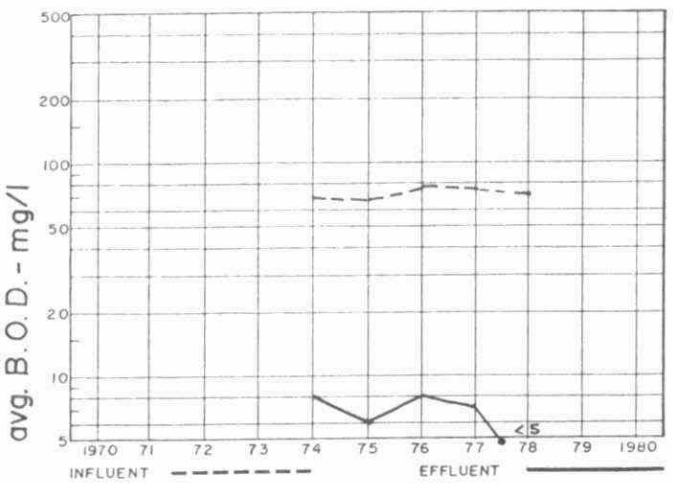
DIGESTER:
45' dia. x 20' swd
Volume: 31800 ft^3

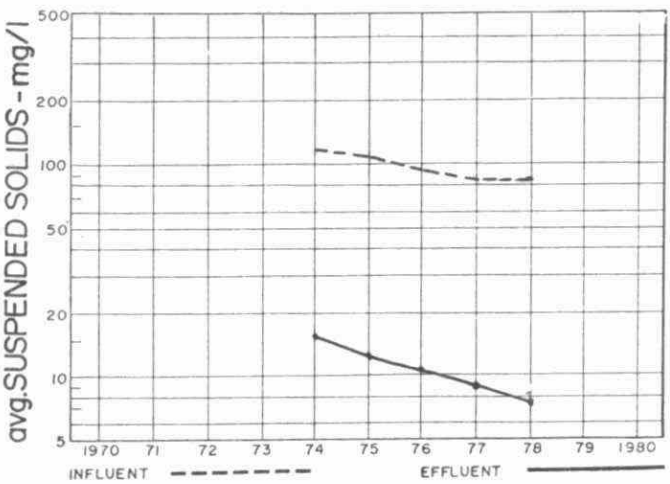
CHLORINE CONTACT CHAMBER:
Four passes, each 16' x 6.2' x 11.75' swd (avg)
Volume: 29000 I. Gal. Detention: 42 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001435 — STURGEON FALLS WPCP

MUNICIPALITY : STURGEON FALLS
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL * COMMENT: HYDRAULIC OVERLOAD

CURRENT POPULATION : 6,289

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.000 MIGD DESIGN BOD5 : 180.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- * FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	31.328	1.000	1.200	4.000	85.0	2.0	97	26.0	84.0	5.0	94	24.7	4.6	.5	89	1.2
FEB	27.186	1.000	1.000	4.000	110.0	5.0	95	28.5	113.0	6.0	94	29.0	4.6	.7	84	1.0
MAR	33.047	1.100	1.300	4.000	65.0	2.0	96	20.8	81.0	8.0	90	24.1	4.1	.7	82	1.1
APR	70.925	2.300	3.400	4.000	68.0	4.0	94	45.3	75.0	12.0	84	44.6	2.8	.6	78	1.5
MAY	48.586	1.600	2.100	4.000	80.0	2.0	97	37.8	81.0	8.0	90	35.4	3.8	.4	89	1.6
JUN	34.600	1.200	1.900	4.000	82.0	6.3	92	26.1	138.0	9.0	93	44.6	3.7	.8	78	1.0
JUL	33.300	1.100	1.200	4.000	50.0	2.5	95	15.8	82.0	6.0	92	25.3	3.4			
AUG	36.723	1.184			60.0	2.5	95	21.1	65.0	9.0	86	20.5	3.0	.5	83	.9
SEP	44.689	1.489	2.400	3.500	73.0	3.0	95	31.2	75.0	5.0	93	31.2	3.0	.4	86	1.1
OCT	49.958	1.612	2.453	3.500	45.0	4.8	89	20.0	64.0	8.5	86	27.7	2.8	.5	82	1.1
NOV	35.356	1.178	1.800	3.500	63.0	4.7	92	20.6	62.0	6.5	89	19.6	3.7	.4	89	1.1
DEC	30.983	999	1.058	3.500	75.0	11.0	85	19.8	96.0	7.0	92	27.5	4.4	1.0	77	1.0
TOTAL	476.681							313.0				354.2				12.6
AVERAGE		1.314	MAXIMUM 3.400	MAXIMUM 4.000	71.3	4.1	94		84.6	7.5	91		3.6	.5	83	
NO. OF SAMPLES					22	23			64	60			22	21		

VALLEY EAST (H., V.C. & V.T.)

PROJECT: Valley East WPCP

PROJECT NO. 1-0039-66

TREATMENT: Conventional Activated Sludge

DESIGN FLOW: 2.5 MIGD

RAW SEWAGE P.S.
Type: One, Smart-Turner
Size: 1000 IGPM

Type: Three,
Size: Each 2000 IGPM

AERATED GRIT TANK
Size: 15' x 15' x 10' awd
Volume: 14,000 I.G.
Retention: 8.1 min

PRIMARY CLARIFIERS
Type: Two, 2-pass
Size: Each pass 12.5'x100'x9.5'awd
Volume(total): 296,000 I.G.
Retention: 2.8 hr

AERATION TANKS
Type: Two, rectangular
Size: each 25'x170'x14'awd
Volume(total): 743,000 I.G.
Retention: 7.1 hr

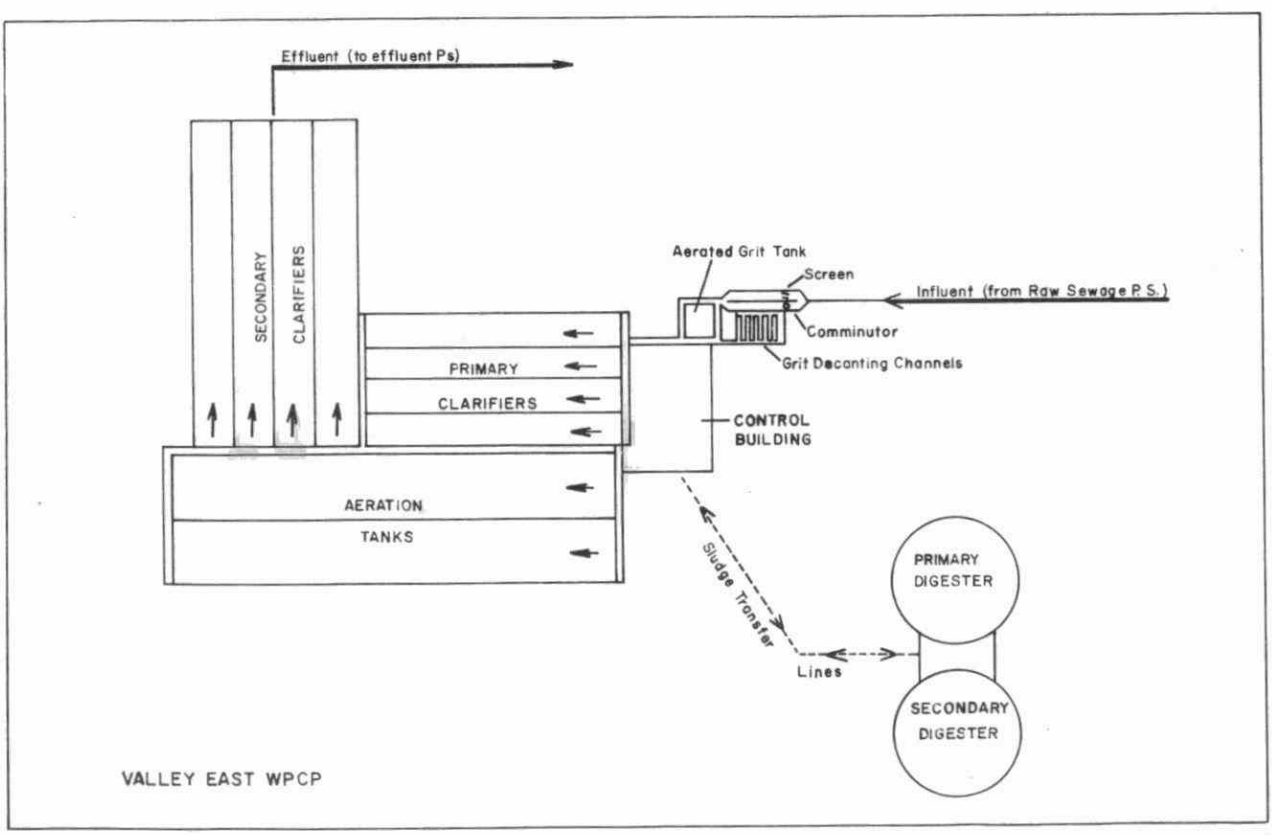
SECONDARY CLARIFIERS
Type: Two, 2-pass
Size: Each pass
15.75' x 125' x 9.5' awd
Volume(total): 467,000 I.G.
Retention: 4.5 hr

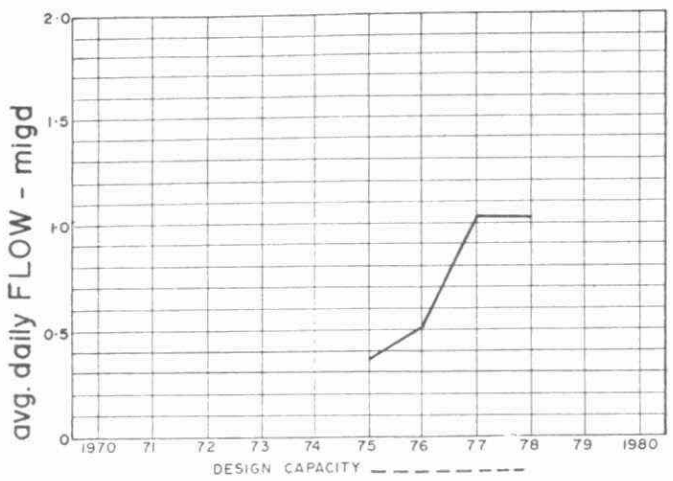
SLUDGE DIGESTION

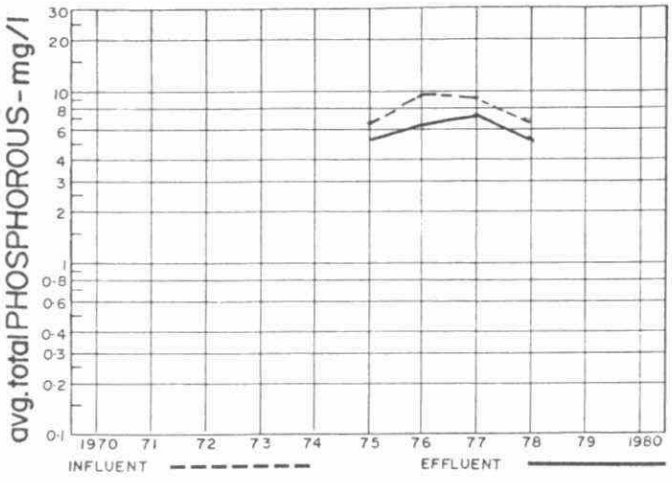
PRIMARY DIGESTER
Size: 50' i.d. x 14' awd
Volume: 245,000 I.G.

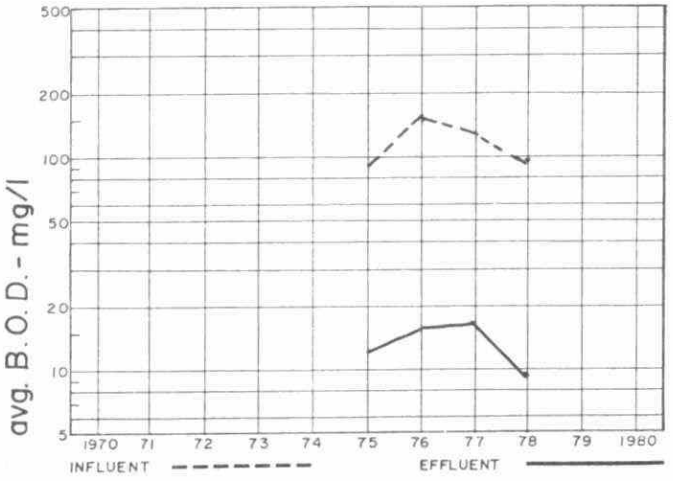
SECONDARY DIGESTER
Size: 50' i.d. x 14' awd
Volume: 245,000 I.G.

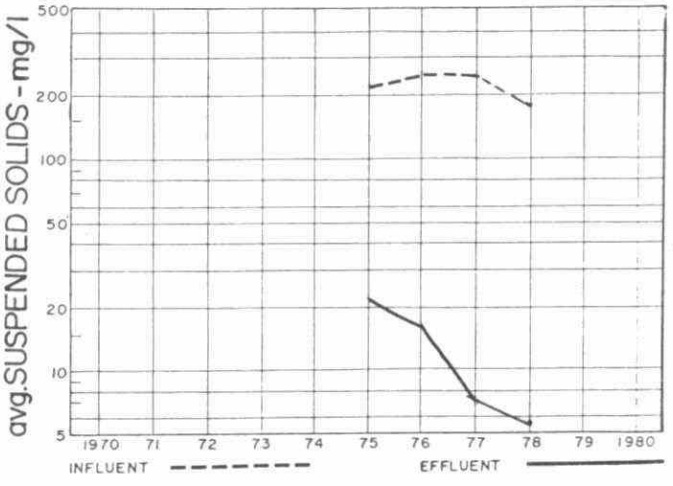
EFFLUENT P.S.
Type: Two, Worthington
Size: Each 4323 IGPM











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001541 — HAMNER, VAL CARON, VAL THERESE

MUNICIPALITY : VALLEY EAST
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
PHOSPHORUS REMOVAL

CURRENT POPULATION : 20,825

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 2.500 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP. SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	34.939	1.127	1.320		110.0	8.0	92	35.6	216.0	4.0	98	74.0	7.8	6.9	11	.3
FEB	31.025	1.108	1.340		125.0	10.0	92	35.6	151.0	4.0	97	45.6	8.8	8.4	4	.1
MAR	35.890	1.157	1.910		135.0	9.0	93	45.2	220.0	5.0	97	77.1	8.6	7.0	18	.5
APR	55.978	1.866	2.843		53.0	6.8	87	25.8	213.0	4.4	97	116.7	5.1	4.8	5	.1
MAY	35.383	1.141	2.004		85.0	5.4	93	28.1	128.0	3.8	97	43.9	5.6	5.5	1	
JUN	22.828	.760			132.0	8.9	93	28.1	178.0	3.5	98	39.8	8.7	7.4	14	.2
JUL	20.634	.666	.828		75.0	3.0	96	14.8	224.0	3.2	98	45.5	6.5	7.1	-	-
AUG	21.580	.696	.819		125.0	6.0	95	25.6	158.0	4.2	97	33.1		6.8		
SEP	25.353	.845	.909		88.0	8.0	90	20.2	194.0	3.7	98	48.2	5.2	3.2	38	.5
OCT	35.551	1.147	1.545		66.0	14.0	78	18.4	154.0	2.6	98	53.8	4.4	1.1	75	1.1
NOV	26.638	.888	1.012		90.0	8.5	90	21.7	192.0	11.6	93	48.0	5.7	.8	85	1.3
DEC	25.299	.816	.937		100.0	30.0	70	17.7	133.0	20.5	84	28.4	6.7	5.2	22	.3
TOTAL	371.098							316.8				654.1				4.4
AVERAGE		1.018	MAXIMUM 2.843	MAXIMUM	98.6	9.8	90		180.0	5.8	96		6.6	5.3	19	
NO. OF SAMPLES					21	19			61	114			23	18		

EXTENDED AERATION PLANTS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

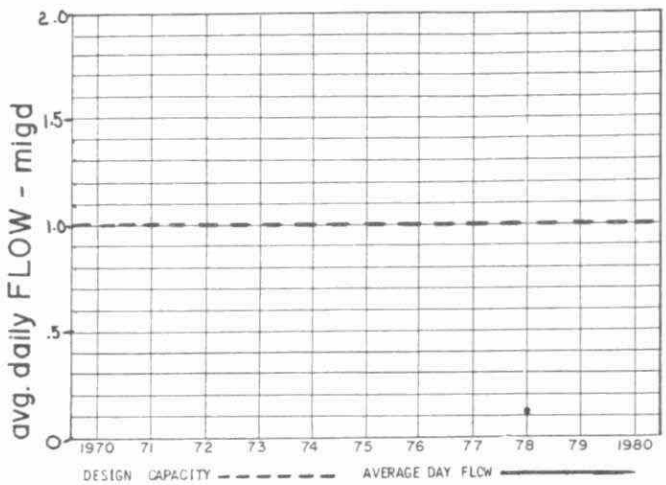
Owen Sound
220 11th St. E.
519-371-2901

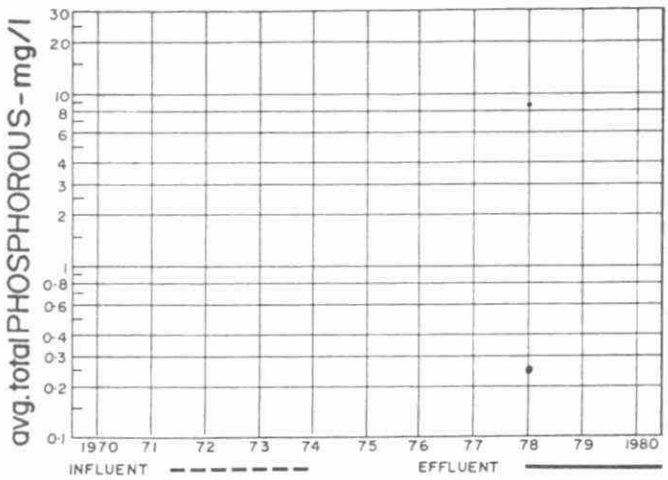
SUB-OFFICE

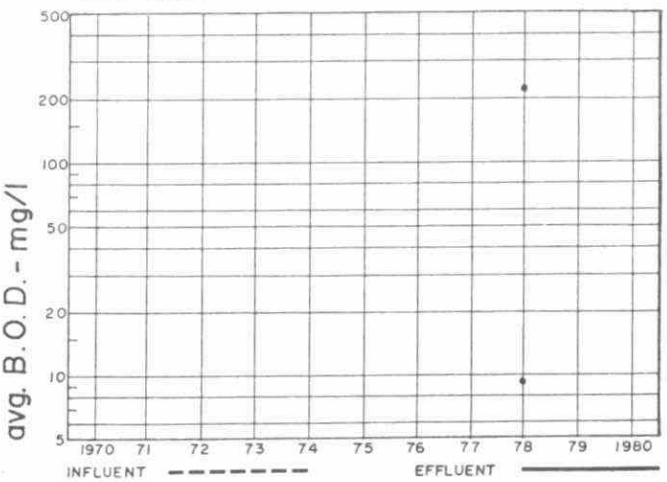
Chatham
435 Grand Ave W.
519-352-5107

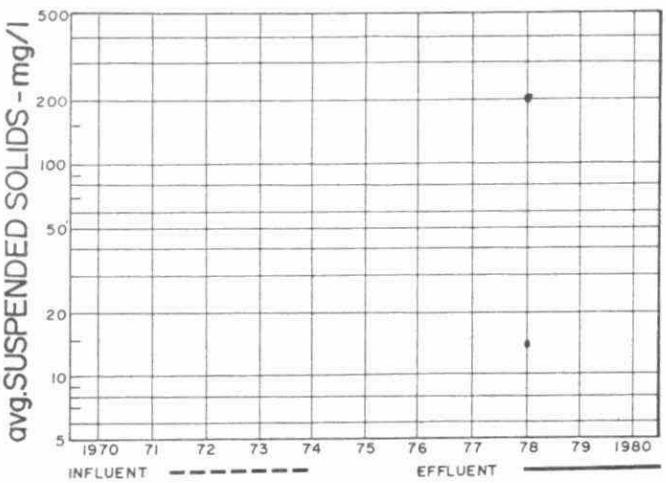
Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
WINDSOR
Lake Erie

DRESDEN









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002014 — DRESDEN WPCP

MUNICIPALITY : DRESDEN
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 3,830

* DATA NOT AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.000 MIGD — DESIGN BOD5 : 264.0 MG/L — DESIGN SUSP.SOLIDS : 218.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.265	.041			*	*			*	*			*	*		
FEB	1.269	.045			*	*			*	*			*	*		
MAR	1.287	.042			*	*			*	*			*	*		
APR	1.310	.044	.056		*	*			*	*			*	*		
MAY	1.382	.045	.053		104.0	2.8	97	1.3	132.0	13.0	90	1.6	9.9	4.0	59	
JUN	1.485	.050	.060		126.0	5.0	96	1.7	139.0	18.3	86	1.7	7.8	4.4	43	
JUL	2.856	.119	.229	.700	311.0	5.2	98	8.7	218.0	20.8	90	5.6	8.2	4.0	51	.1
AUG	6.170	.199	.450	.700	238.0	12.0	94	13.9	126.0	9.8	92	7.1	5.3	2.2	58	.1
SEP	12.940	.430	.590	.670	209.0	4.9	97	26.4	151.0	5.8	96	18.7	5.5	.8	85	.6
OCT	5.560	.179	.620	.670	382.0	9.5	97	20.7	384.0	11.5	97	20.7	11.2	1.3	88	.5
NOV	3.511	.117	.142	.670	215.0	8.9	95	7.2	208.0	12.7	93	6.8	9.1	.8	91	.2
DEC	3.395	.109	.136	.670	218.0	27.5	87	6.4	242.0	22.3	90	7.4	12.0	2.6	78	.3
TOTAL	42.430							86.3				69.6				1.8
AVERAGE		.118	MAXIMUM .620	MAXIMUM .700	225.3	9.4	95		200.0	14.2	92		8.6	2.5	70	
NO. OF SAMPLES					25	25			25	25			25	25		

MAIDSTONE (BELLE RIVER)

PROJECT Town of Belle River

PROJECT NO. 1-0305-72

TREATMENT Extended Aeration

DESIGN FLOW 1.5 MIGD

BOD - Raw Sewage 300 mg/l

SS - Raw Sewage 300 mg/l

PUMPING STATION

Two, raw sewage pumps (one standby) @430 IGPM each @ 32' TDH. Two vertical centrifugal pumps @ 1300 U.S. GPM each @ 68' TDH.

PRIMARY TREATMENT

Inlet Works

(5.45 MIGD) bar screens, 12" parshall flume, comminutor and by-pass.

Grit Removal

(5.45 MIGD) 1475 Cu. Ft. aerated grit tank (10'x10'x14.75' WD) equipped with air diffusion Equipment 50-100 SCFM.

SECONDARY TREATMENT

Aeration Tanks

(8.45 MIGD) Two 32,450 Cu. Ft. (0.405 MIG total) tanks.
Contact Zone - 7390 Cu. Ft.
Reaeration Zone - 25060 Cu. Ft.
Aeration tanks are equipped with air diffusion equipment allowing 1325 SCFM per tank.
Contact Zone (22'x24'x14' D)
Reaeration Zone (74.66x24x14' D)

Air Supply

Three, identical, centrifugal air compressors 150 HP, 2710 CFM.

Final Clarifiers

Two, 65' diameter equipped with maximum sludge recirculation capacity 2.25 MIGD per tank. Scum baffle and removable rotating skimming device. Three, identical, horizontal, centrifugal, variable speed drive activated sludge return pumps @ 1050 IGPM @ 29' TDH. One scum pump @ 50 IGPM.

CHEMICAL TREATMENT

Phosphorous Removal

4000 IG chemical storage tank with two chemical metering pumps.

Chlorination

Two, 500 lb/day chlorinators.
Chlorine contact chamber with two compartments, 3150 Cu. Ft. @ (25'x14'x9' D).

SLUDGE TREATMENT

Aerobic Digesters

Two tanks (98'x20'x14'D) 27,440 Cu. Ft. each. One equipped with air diffusion equipment allowing 1335 SCFM, and decanting device.

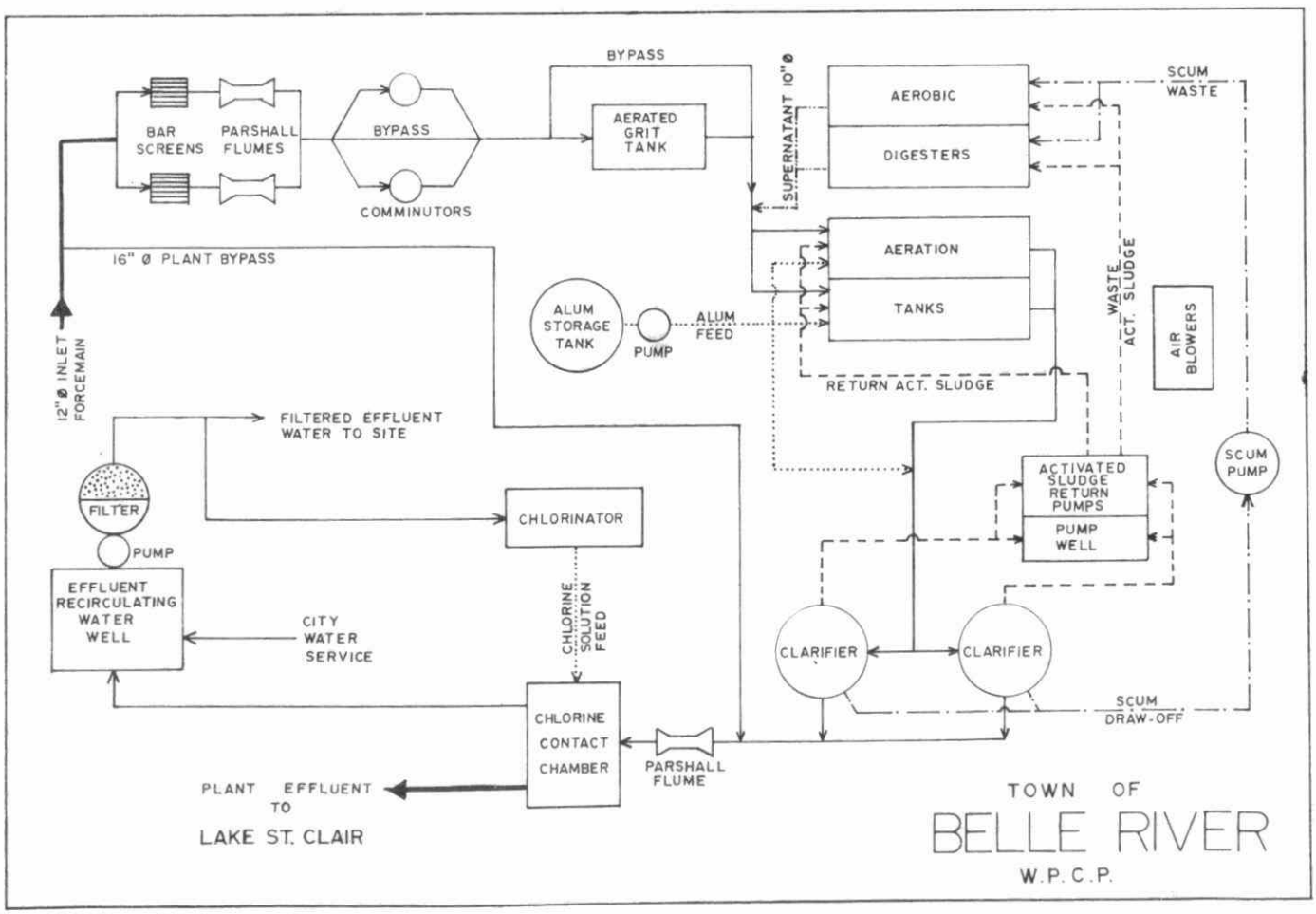
OUTLET WORKS

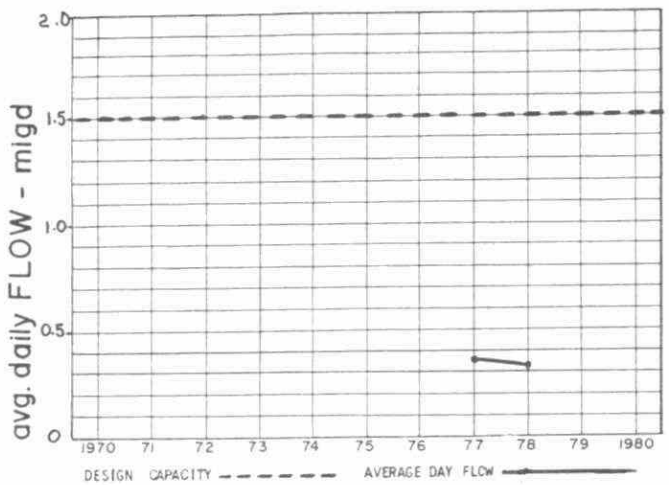
Bypass

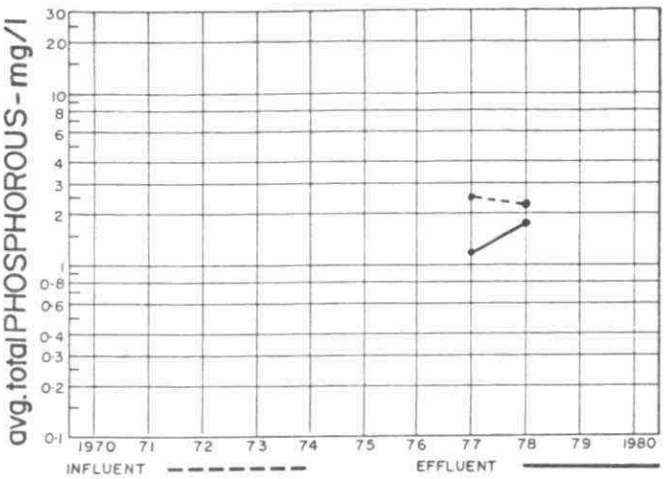
From start of influent works to a point just ahead of the effluent parshall flume.

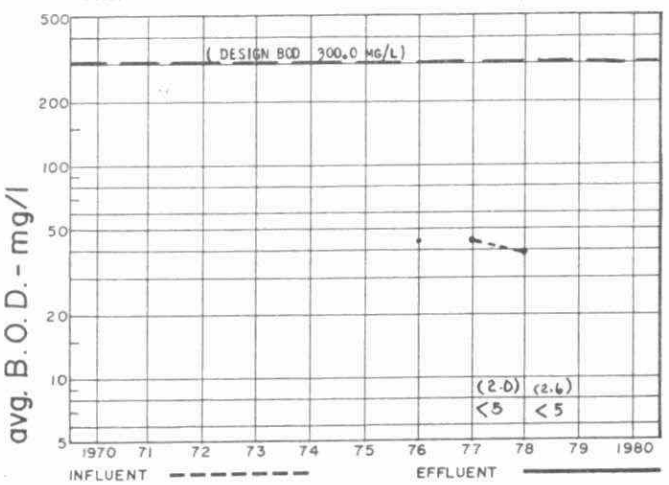
Outfall

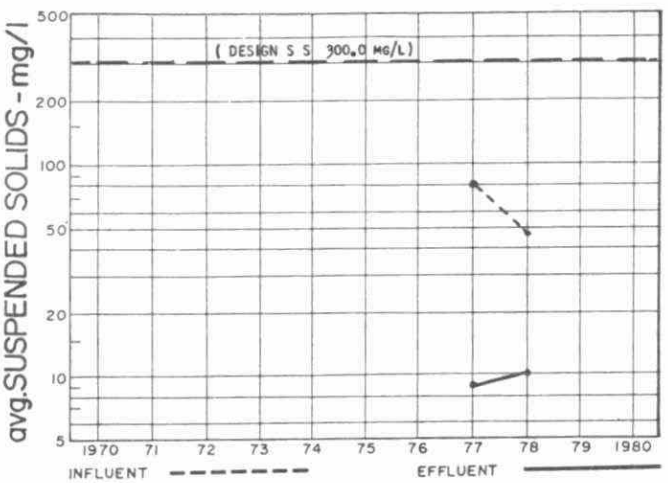
To Lake St. Clair.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002078 — BELLE RIVER WPCP

MUNICIPALITY : MAIDSTONE BELLE RIVER
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 11,500

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.500 MIGD — DESIGN BOD5 : 300.0 MG/L — DESIGN SUSP.SOLIDS : 300.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	8.440*	.270	.380		28.0	4.0	85	2.0	67.0	11.0	83	4.7	3.5	1.2	65	.1
FEB	6.280	.220	.270		29.0	3.0	89	1.6	44.0	12.0	72	2.0	1.7	2.2	-	-
MAR	14.028	.452	1.166		37.0	3.0	91	4.7	59.0	16.3	72	5.9				
APR	12.184	.406	.518	.800	38.0	1.1	97	4.4	50.0	13.1	73	4.4	1.9	1.2	36	
MAY	9.864	.318	.372	.500	55.0	12.0	78	4.2	54.0	13.2	75	4.0	5.7	2.0	64	.3
JUN	8.299	.277	.462	.500	43.0	4.4	89	3.2	46.0	13.7	70	2.6	1.9	2.7	-	-
JUL	9.306	.300	.496	.500	46.0	1.0	97	4.1	53.0	8.9	83	4.1	2.1	2.2	-	-
AUG	9.848	.318	.600	.600	38.0	.1	99	3.7	56.0	5.1	90	5.0	1.6	2.1	-	-
SEP	10.910	.364	.434	.600	35.0	.6	98	3.7	39.0	7.0	82	3.4	1.5	2.3	-	-
OCT	10.842	.350	.455	.700	42.0	.6	98	4.4	36.0	8.9	75	2.9	1.9	1.9		
NOV	8.480	.282	.390	.550	47.0	1.5	96	3.8	46.0	5.7	87	3.4	2.0	1.2	40	
DEC	9.661	.312	.428	.500	36.0	.8	97	3.4	25.0	5.6	77	1.8	1.1	1.2	-	-
TOTAL	118.142							43.2				44.2				4
AVERAGE		.322	MAXIMUM 1.166	MAXIMUM .800	39.5	2.6	93		47.9	10.0	79		2.2	1.8	18	
NO. OF SAMPLES					61	36			62	62			12	12		

MILDMAY

PROJECT : Mildmay
PROJECT NO. : 1-011-67
TREATMENT : Extended Aeration
DESIGN FLOW : 0.2125 MIGD

SEWAGE PUMPING STATION
Two centrifugal vertical dry pit raw sewage pumps each rated at 600 IGPM at 106 FT T.D.H. driven by a 30hp 3 speed (150-300-600 IGPM) motor
One 60 KW standby diesel generator.

INLET WORKS
One flowminutor with emergency bypass equipped with manually cleaned coarse bar screen.
Twin grit channels, each 25'Lx1.75'W.

AERATION TANK
One 34,000 FT^3 aeration tank in two compartments (2600 sq. ft.x 13ft.SWD)
24 hrs detention at DWF.
Max. return sludge 200% at DWF

FINAL CLARIFIER
One 44.25' diameter 10'SWD circular clarifier.
Effective surface area 1310 sq.ft.
equivalent to a peak loading rate rate of 660 IGPM/sq.ft., at 0.865 MIGD
Scum baffle, mechanical skimmer and air lift.

CHLORINE CONTACT CHAMBER
90 sq.ft.x11' SWD 42 minutes detention
One submersible chlorination water pump rated at 10 USGPM @ 95 T.D.H.
One chlorine residual analyser pump rated a 10USGPM @ 50 T.D.H.
One vertical turbine effluent water pump rated at 35 USGPM @ 122 T.D.H.

SLUDGE HOLDING TANK
One, 260 sq.ft.x13.0'SWD.
54 days detention.
Air diffusers decanting device
One submersible sludge unloading pump rated at 150 USGPM @ 40 T.D.H.

BYPASS
30' of 10" diam. sewer from exit of grit channels to outfall chamber

OUTFALL SEWER
300' of 11" O.D. polyethylene sewer discharging to Otter Creek.

BLOWER EQUIPMENT
Three positive displacement blowers each rated at 300 SCFM @ 8 PSIG, 840 RPM driven by 20hp,1750 RPM motors

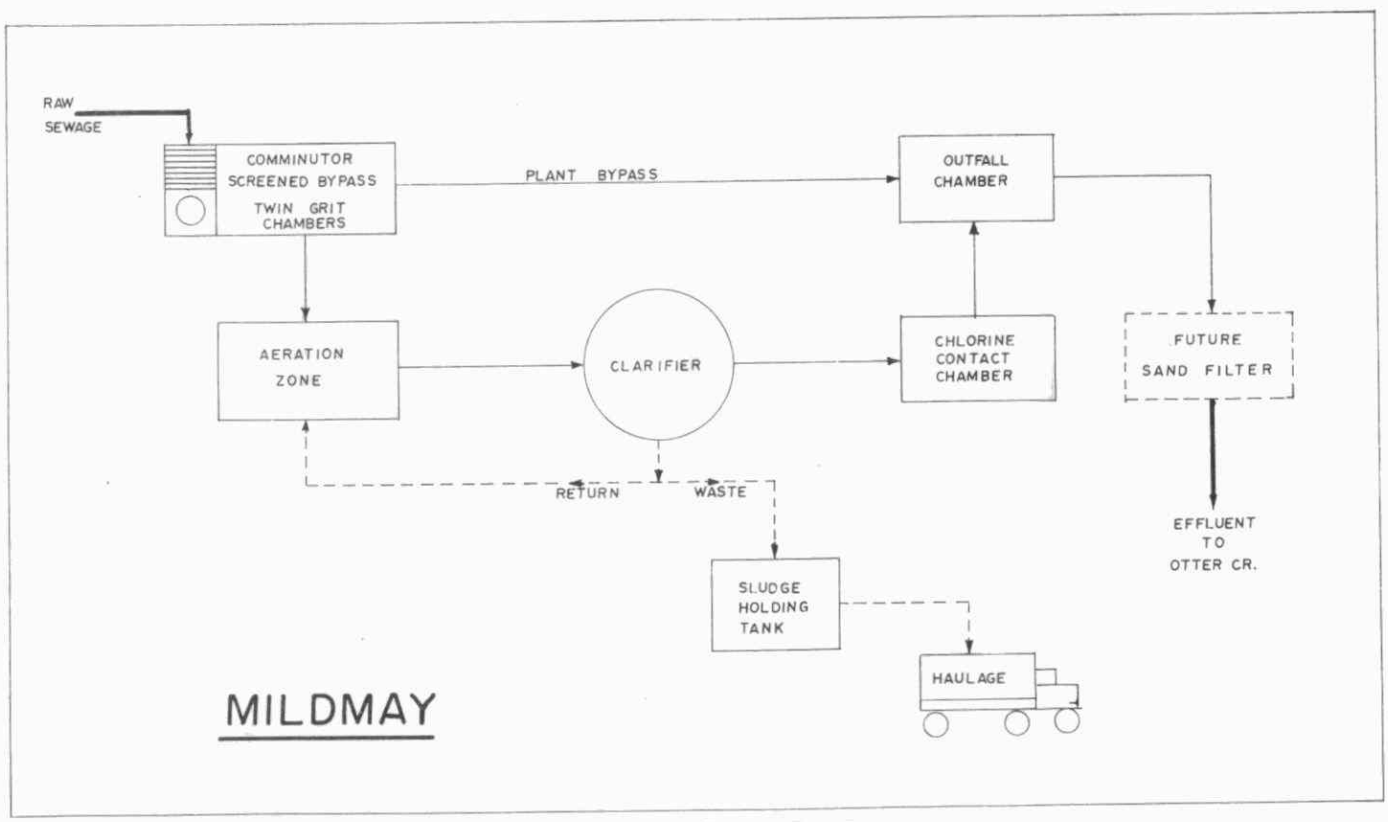
CHEMICAL FEED SYSTEM
(Phosphrous removal)
One 6000 IG chemical storage tank for Alum, $FeCl_2$ or FeSO4
Two positive displacement chemical feed pumps ea rated at 15 IGPH @ 120 PSI feeding to entry or exit of the aeration tank

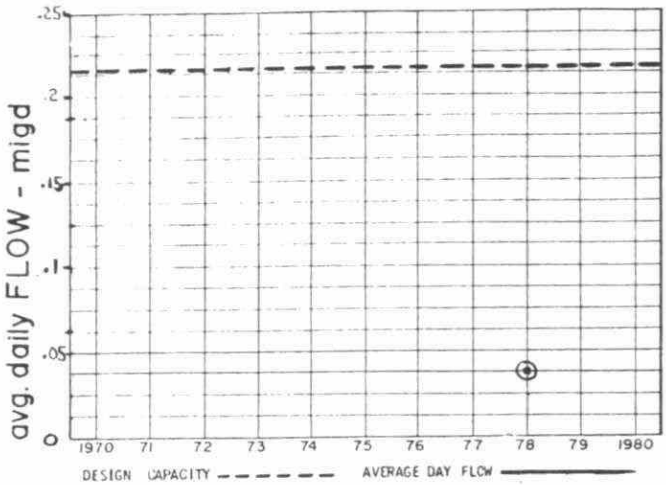
CHLORINATION
One v-notch gas chlorinator with a capacity of 100lb/day.
One chlorine residual analyser.

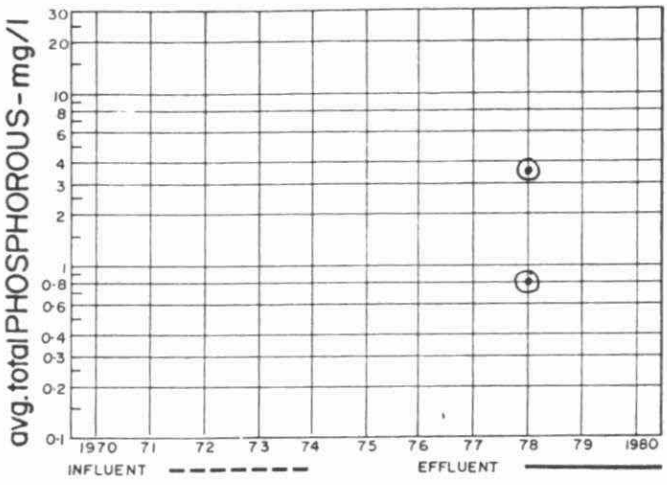
WELL
One 6" diam. well approx 150' deep with a 25 IGPM deep well submersible pump

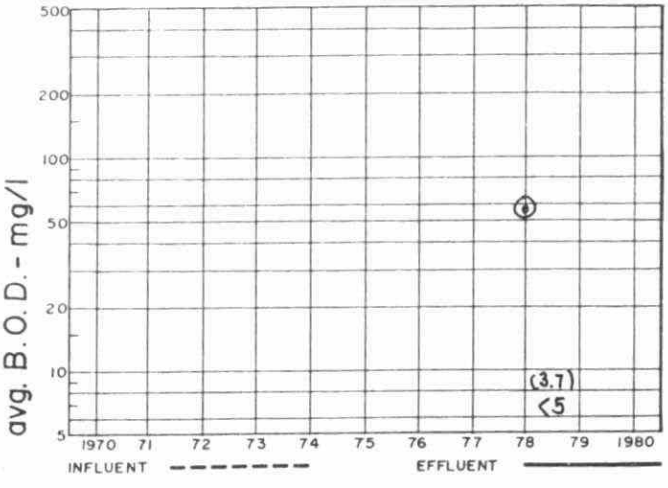
STANDBY POWER
One 75 KW.93.75 KVA diesel generator set with 200 IG fuel tank.

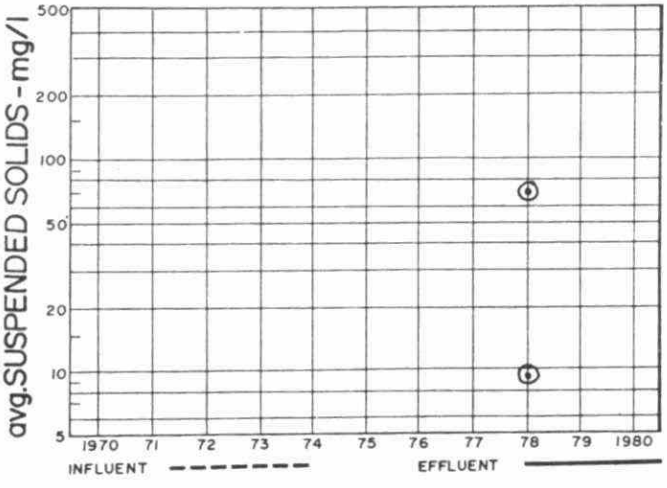
MISCELLANEOUS
One portable submersible sewage pump rated at 150 USGPM @ 40' T.D.H.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002194 — MILDMAY WPCP

MUNICIPALITY : MILDMAY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 981

* DATA NOT AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.213 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78 DEC/78					*	*			*	*			*	*		
JAN	.570	.018			*	*			*	*			*	*		
FEB	.801	.029			*	*			*	*			*	*		
MAR	1.240	.040			*	*			*	*			*	*		
APR	1.257	.042			*	*			*	*			*	*		
MAY	1.154	.040	.049		39.0	8.6	77	.3	46.0	17.7	61	.3	1.4	.4	71	
JUN	1.163	.039	.058		16.0	8.1	49		34.0	13.5	60	.2	1.5	.5	66	
JUL	1.256	.041	.055		21.0	1.6	92	.2	28.0	8.0	71	.2	2.1	.4	80	
AUG	1.054	.034	.047		19.0	1.2	93	.1	24.0	6.0	75	.1	2.3	.3	86	
SEP	1.274	.042	.070		93.0	1.4	98	1.1	73.0	4.3	94	.8	5.2	.7	86	
OCT	1.295	.042			46.0	1.6	96	.5	35.0	7.8	77	.3	3.7	1.4	62	
NOV	1.062	.035	.047		90.0	3.0	96	.9	128.0	7.3	94	1.2	6.6	.8	87	
DEC	1.174	.038	.049		140.0	4.6	96	1.5	201.0	10.0	95	2.2	5.4	2.2	59	
TOTAL	13.300							4.6				5.3				
AVERAGE		.037	MAXIMUM .070	MAXIMUM	58.0	3.7	93		71.1	9.3	86		3.5	.8	76	
NO OF SAMPLES					17	17			17	17			17	17		

MOORE (CORUNNA)

PROJECT Moore Twp. (Corunna) WPCP

PROJECT NO. 2-0088-61

TREATMENT Extended Aeration

DESIGN FLOW 0.96 mgd

DESIGN POPULATION 4,000

BOD - Raw Sewage 150 mg/l
- Removal 90-95%

SS - Raw Sewage 150 mg/l
- Removal 90-95%

PRETREATMENT

Comminution

Type: Worthington comminutor
Size: One Model 15-C-4

Grit Removal

Type: C.P. Aer-Degritter with air lift
Size: 3780 gal
Retention: 17 min

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air, Single pass
Size: Two 84' x 17' x 14.25' (avg) (40,698 cu ft or 254,000 gal)
Retention: 24.0 hours

Air Supply

Type: Sutorbilt
Size: Two 1000 cfm

Diffusers

Type: C.P. Spargers
Spacing: 22 per tank @ 20" c-c

Secondary Sedimentation

Type: Dorr
Size: Two 22' x 22' x 12½' swd (75,300 gal)
Retention: 5.7 hours
Loading: Surface, 330 gal/ft^2/day
Weir, 2,350 gal/ft/day

CHLORINATION

Type: W & T, Manual
Size: One 100 lb/day

Chlorine Contact Chamber

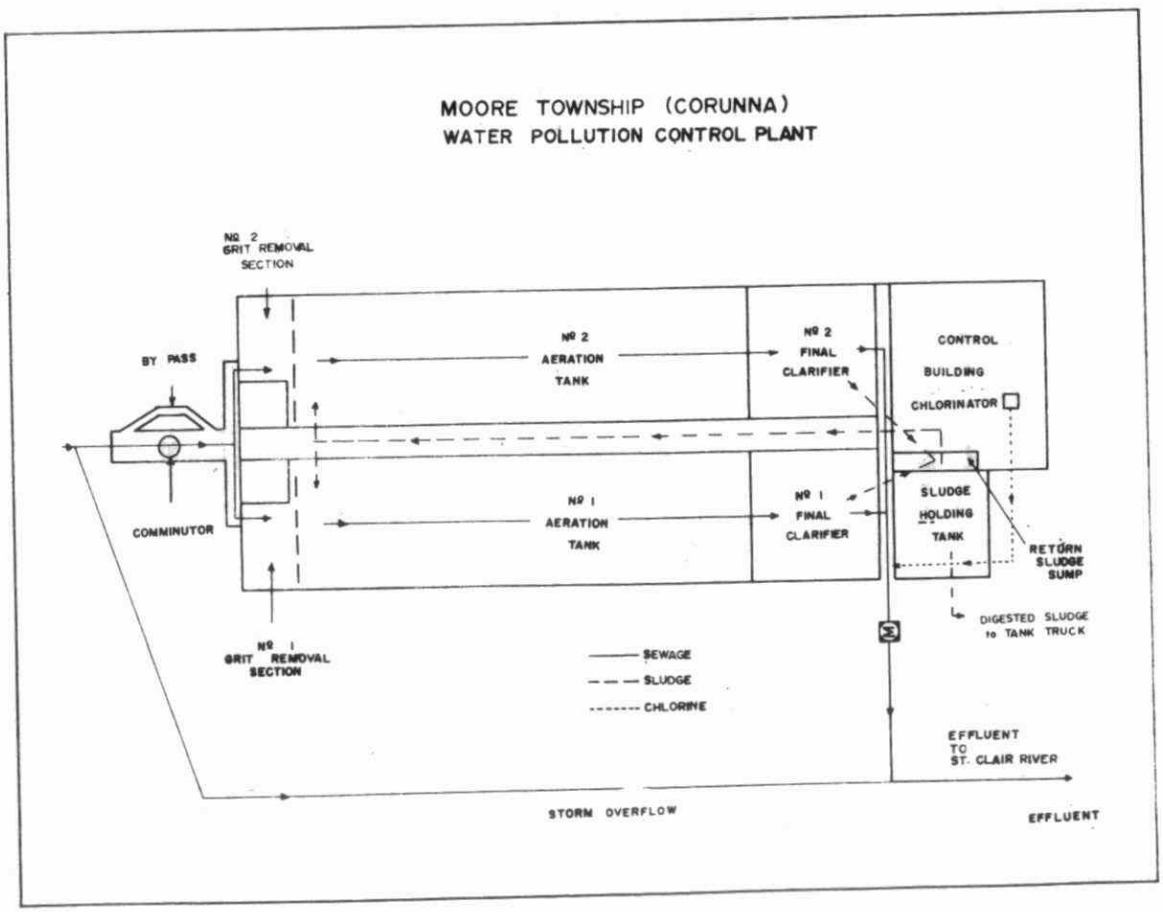
- in outfall

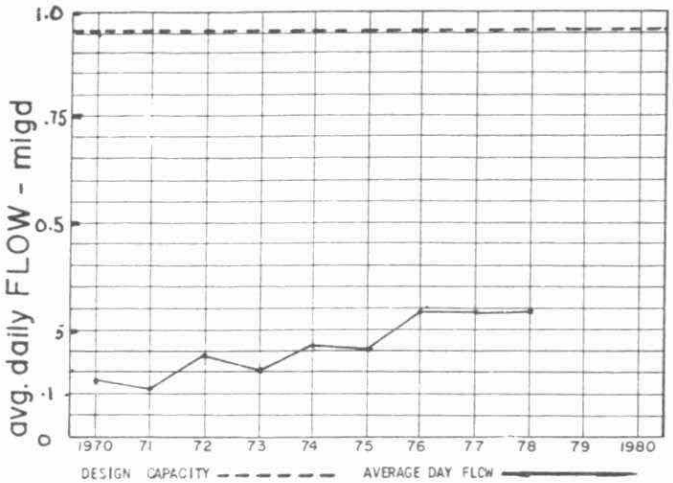
OUTFALL

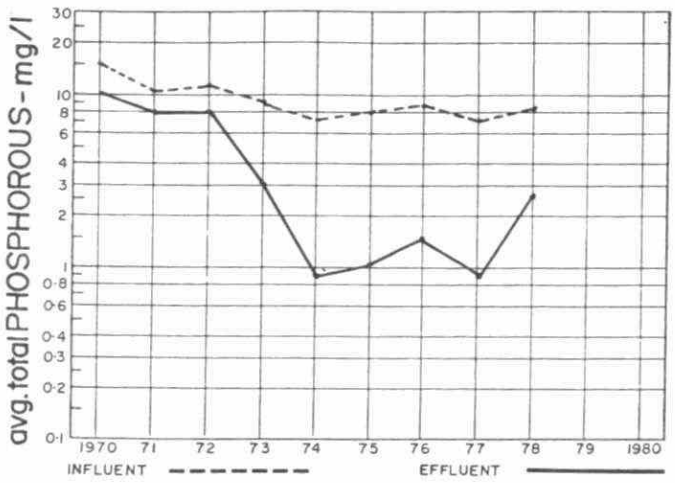
196' of 48" dia corrugated pipe to St. Clair River

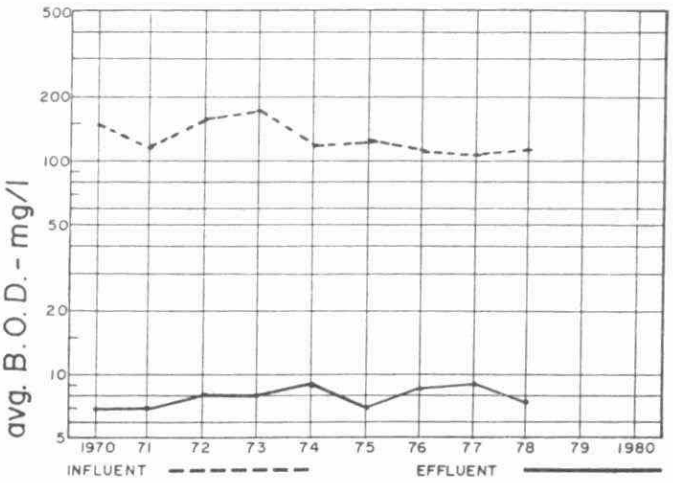
SLUDGE HANDLING

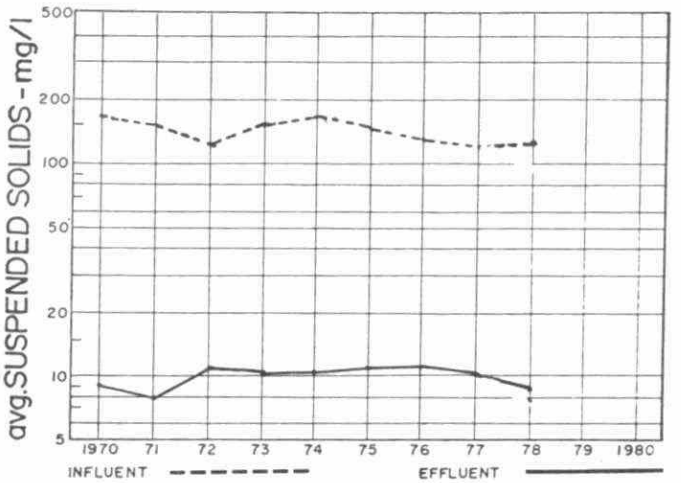
Type: Sludge holding tank (decanted)
Size: One 17' x 17' x 15' (23,000 gal @ 12.8' depth)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000481 — CORUNNA P.V. PLANT EXP TO .960 MG 78

MUNICIPALITY : MOORE (CORUNNA)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 9,591

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.960 MIGD — DESIGN BOD5 : 150.0 MG/L — DESIGN SUSP.SOLIDS : 150.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
							REDUCTION				REDUCTION				REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	8.510	.270	.350		110.0	11.0	90	8.4	115.0	10.0	91	8.9	8.0	.9	88	.6
FEB	7.670	.270	.290		117.0	12.0	89	8.0	117.0	10.0	91	8.2	12.0	2.0	83	.7
MAR	10.680	.340	.520		113.0	12.0	89	10.7	115.0	10.0	91	11.2	7.5	1.2	84	.6
APR	8.165	.270	.360	.550	112.0	11.0	90	8.2	122.0	11.0	90	9.0	9.4	1.4	85	.6
MAY	9.497	.306	.412	.600	114.0	16.0	85	9.3	110.0	11.0	90	9.4	8.4	2.4	71	.5
JUN	9.611	.320	.420	.600	86.0	3.4	96	7.9	57.0	8.0	85	4.7	6.4	5.2	18	.1
JUL	8.687	.280	.341	.410	150.0	10.0	93	12.1	91.0	13.0	85	6.7	7.9	8.2	-	-
AUG	10.682	.345	.364	.400	16.0	4.0	75	1.2	180.0	6.0	96	18.5		3.2		
SEP	9.115	.303	.391	.675	160.0	4.0	97	14.2	180.0	6.0	96	15.8	9.0	3.1	65	.5
OCT	8.790	.284	.321	.550	195.0	3.0	98	16.8	122.0	8.0	93	10.0	11.6	1.7	85	.8
NOV	8.305	.277	.360	.700	140.0	4.6	96	11.2	130.0	2.5	98	10.5	9.6	2.0	79	.6
DEC	9.715	.313	.560	.850	100.0	4.2	95	9.3	185.0	5.5	97	17.4	7.3	1.1	84	.6
TOTAL	109.427							117.3				130.3				5.6
AVERAGE		.298	MAXIMUM .560	MAXIMUM .850	117.7	7.9	93		127.0	8.4	93		8.8	2.7	69	
NO. OF SAMPLES					31	31			31	61			11	12		

MOORE (COURTRIGHT)

PROJECT Village of Courtright WPCP

PROJECT NO. 1-0157-68

TREATMENT Extended Aeration

DESIGN FLOW .120 MIGD

PRIMARY TREATMENT

Screening

$1\frac{1}{2}$" x $1\frac{1}{2}$" bars @ 2" c/c

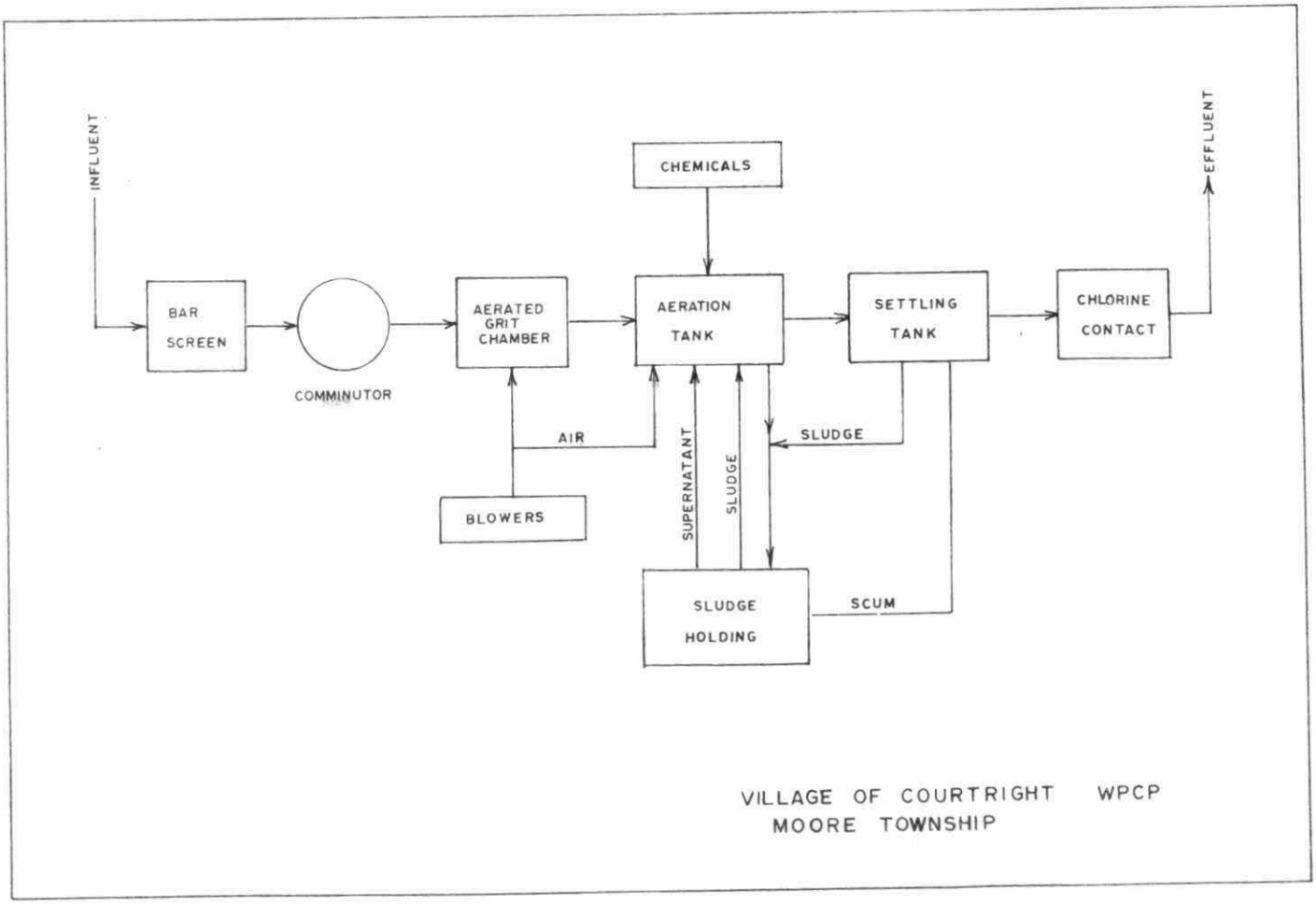
SECONDARY TREATMENT

Aeration Tanks

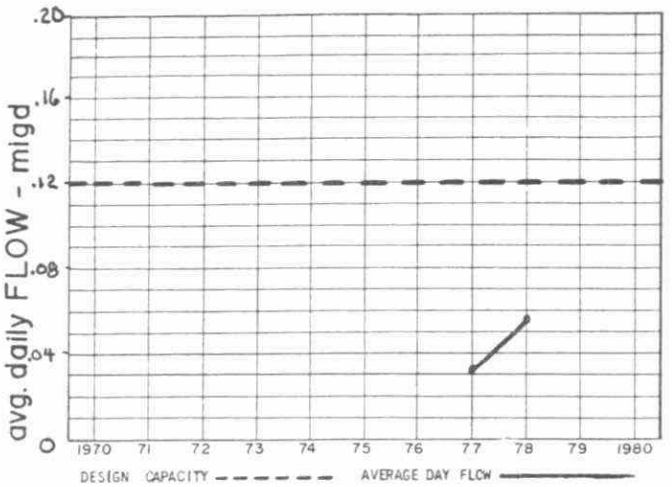
Volume: 0.12 mg

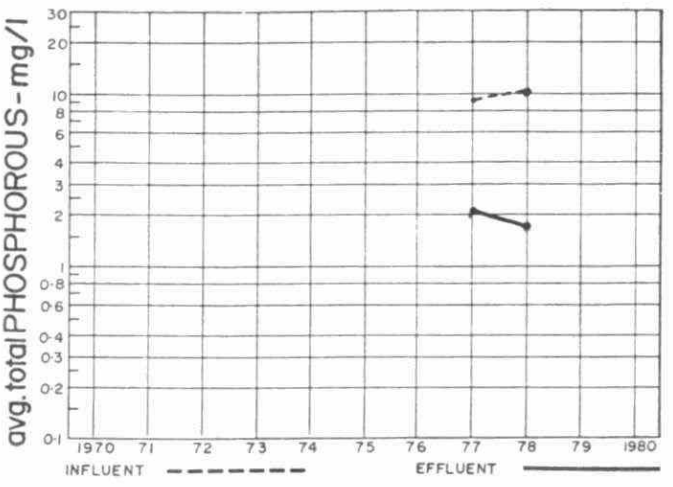
PUMPING STATION

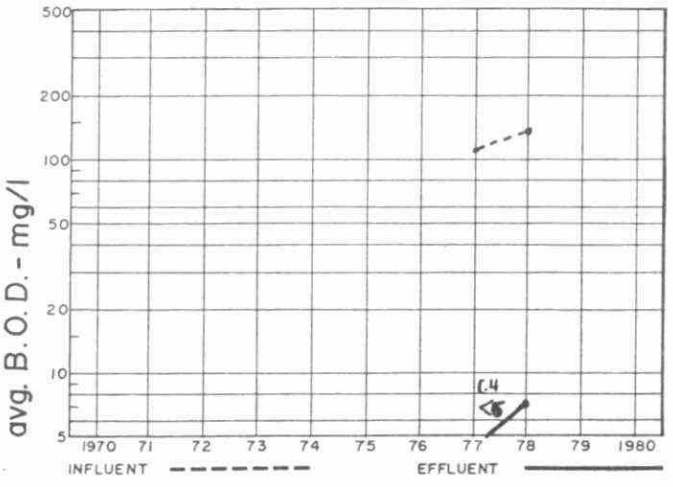
2 submersible pumps plus one standby.
Any two rated at 385 IGPM.

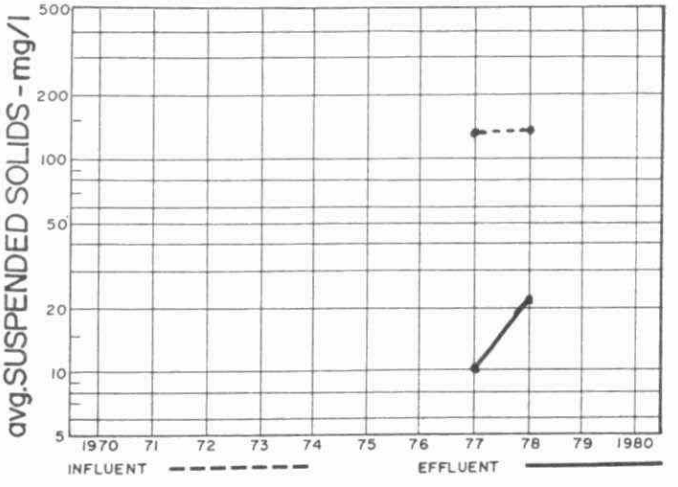


VILLAGE OF COURTRIGHT WPCP
MOORE TOWNSHIP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001818 — COURTRIGHT W P C P

MUNICIPALITY : MOORE (COURTRIGHT)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION :

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.120 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.833	.026	.098		142.0	9.0	93	1.1	162.0	31.0	80	1.0	9.8	.9	90	
FEB	.646	.023	.053		126.0				105.0	20.0	80	.5	11.8	.9	92	
MAR	1.383	.045	.151		130.0	11.0	91	1.6	128.0	27.0	78	1.3	9.7	.8	91	.1
APR	1.464	.049	.078		116.0	7.0	93	1.5	196.0	25.0	87	2.5	9.2	1.3	85	.1
MAY	2.013	.065	.084		102.0	6.0	94	1.9	66.0	20.0	69	.9	8.7	1.4	83	.1
JUN	2.042	.068	.084		92.0	3.6	96	1.8	90.0	9.5	89	1.6	9.1	4.9	46	
JUL	2.018	.065	.077		155.0	6.8	95	2.9	117.0	32.0	72	1.7	8.8	1.6	81	.1
AUG	1.979	.064	.083		100.0	4.0	96	1.9	86.0	13.0	84	1.4	8.7	1.4	83	.1
SEP	2.033	.068	.102		240.0	5.6	97	4.7	111.0	19.0	82	1.8	13.3	2.9	78	.2
OCT	2.034	.066	.080		180.0	4.0	97	3.5	158.0	20.0	87	2.8	11.0	1.6	85	.1
NOV	2.023	.067	.090		116.0	11.2	90	2.1	205.0	22.0	89	3.7	11.6	2.8	75	.1
DEC	2.262	.073	.140		100.0	12.8	87	1.9	138.0	22.0	84	2.6	8.5	1.9	77	.1
TOTAL	20.730							24.9				21.8				1.0
AVERAGE		.057	MAXIMUM .151	MAXIMUM	133.2	7.3	94		130.1	21.7	83		10.0	1.8	81	
NO. OF SAMPLES					12	11			12	12			12	12		

PROJECT Westminster Twp. WPCP

PROJECT NO. 2-0033-59

TREATMENT Extended Aeration

DESIGN FLOW 0.25 mgd

DESIGN POPULATION 5,000

RAW SEWAGE PUMPS

Make: Chicago Pump
#1 - 100 gpm @ 23' tdh
Type: 4x4, 2hp electric
#2 - 100 gpm @ 23' tdh
Type: 4x4, 2hp electric
with standby Wisconsin
THD size $3\frac{1}{4}$ x $3\frac{1}{4}$ gasoline engine
#3 - 250 gpm x 20' tdh
Type: LMC4, 3 hp electric

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air; single-pass
Size: Two 54' x 27' x 14' (252,000 gal)
Retention: 24.2 hr

Diffusers

- Discfusers on swing arm

Air Supply

Type: Sutorbilt
Size: Three 337 scfm @ 7 psi

Secondary Sedimentation

Type: Link-Belt
Size: Two 54' x 8' x 9.25' (50,200 gal)
Retention: 4.80 hr
Loading: Surface, 580 gal/ft^2/day
Weir, 1955 gal/ft/day

CHLORINATION

Type: W & T
Size: One 100 lb/day

Chlorine Contact Chamber

Size: One 10' x 7' x 9' (3930 gal)
Retention: 22.7 min

OUTFALL

- to Dingman Creek

TERTIARY TREATMENT

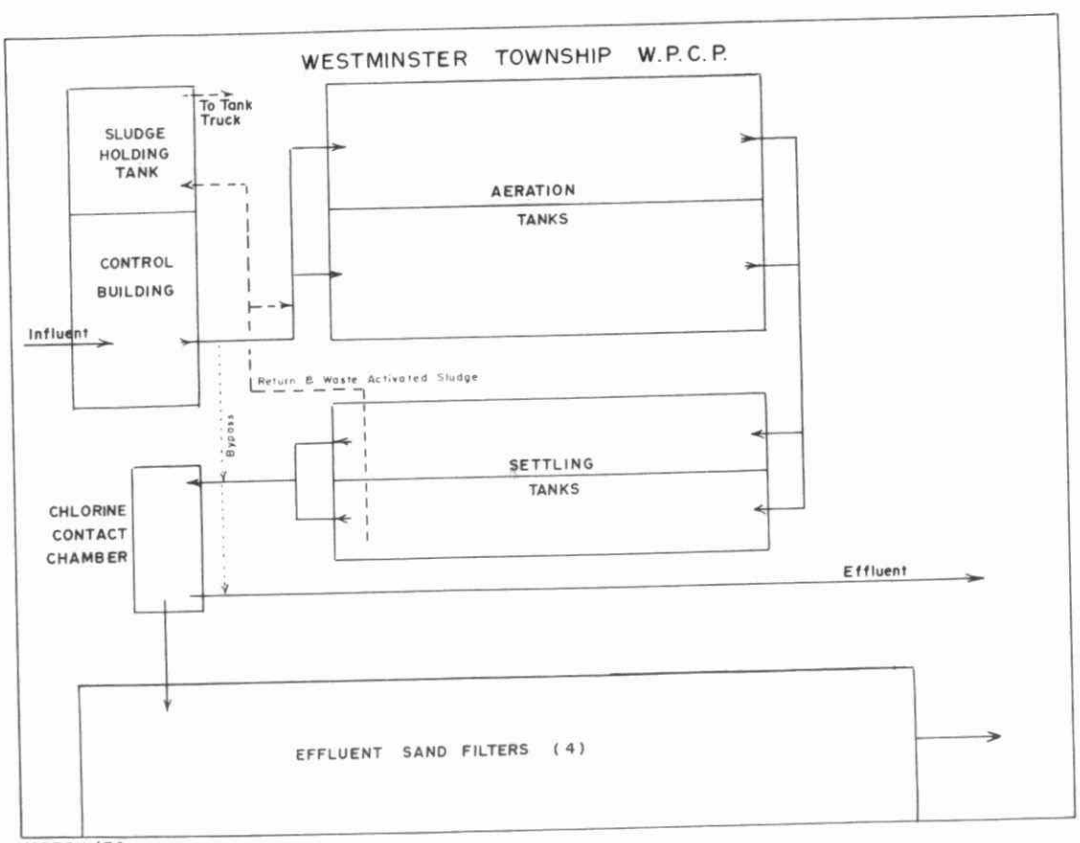
Effluent Sand Filters

Size: Four units (26,900 sq ft or 0.62 acres)
Depth: 30" of sand (min)
Capacity: .405 mil gal/acre/day

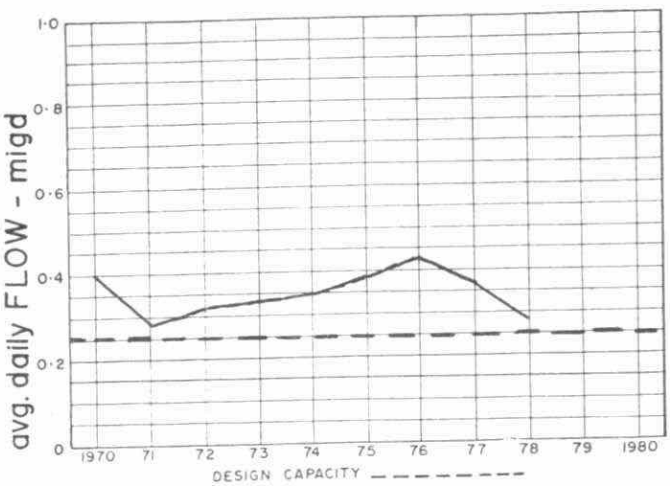
SLUDGE HANDLING

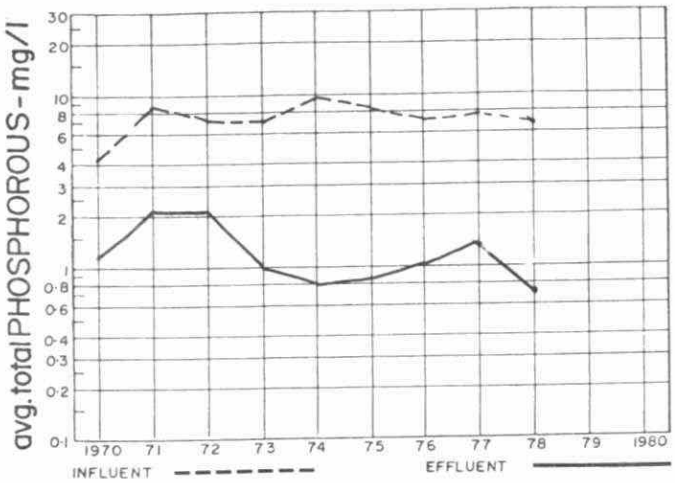
Sludge Holding Tank

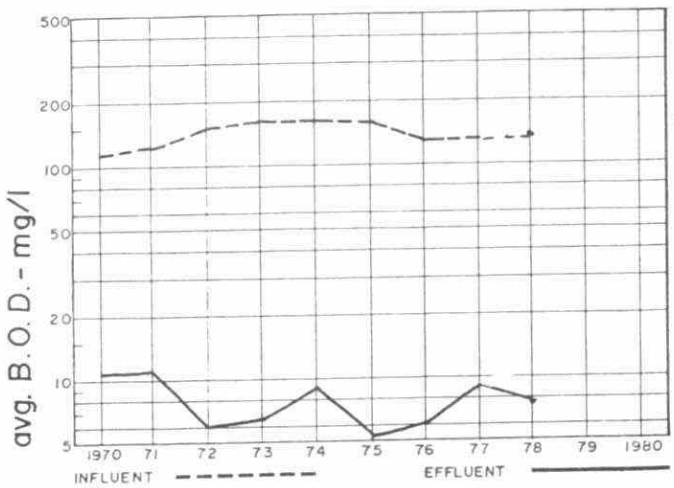
Size: 4,460 cu ft or 27,850 gal

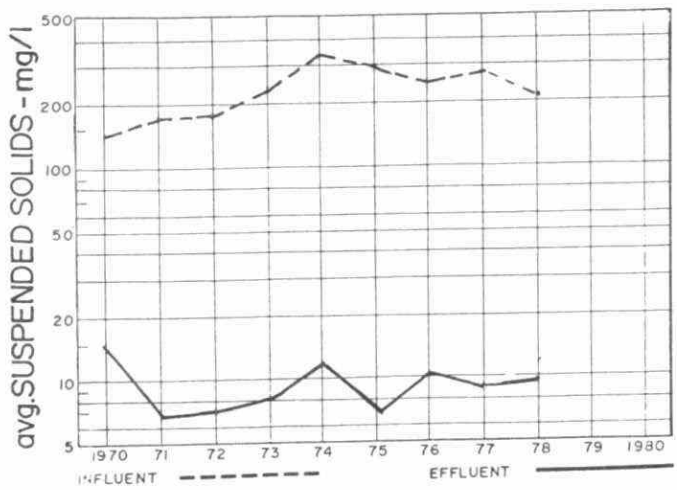


MARCH/76









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000800 — WESTMINSTER WPCP

MUNICIPALITY : WESTMINSTER TWP
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 6,267

* COMMENT: HYDRAULIC OVERLOAD

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.250 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- * FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	11.150	.360	.650		132.0	14.0	89	13.1	232.0	6.0	97	25.1	6.8	1.5	77	.5
FEB	9.830	.350	.510		127.0	11.0	91	11.4	213.0	14.0	93	19.5	8.1	.9	88	.7
MAR	13.950	.450	.670		86.0	9.0	89	10.7	150.0	15.0	90	18.8	4.5	.6	86	.5
APR	10.322	.344	.459		85.0	5.6	93	8.1	127.0	11.0	91	11.9	5.7	.9	84	.4
MAY	13.023*	.420	.993		161.0	5.9	96	20.1	209.0	12.0	94	25.6	7.3	.6	91	.8
JUN	9.841	.328	.415		165.0	9.4	94	15.3	220.0	6.5	97	21.0	8.1	.4	94	.7
JUL	8.339	.269	.329		170.0	5.5	96	13.7	214.0	6.0	97	17.3	10.0	.4	95	.7
AUG	8.129	.262	.326		152.0	5.6	96	11.9	155.0	4.5	97	12.2	7.8	.5	92	.5
SEP	8.565	.286	.473		177.0	2.6	98	14.9	338.0	5.5	98	28.4	6.7	.6	91	.5
OCT	10.252	.330	.414		148.0	4.1	97	14.7	172.0	8.1	95	16.8	6.7	.6	91	.6
NOV	11.597	.386	.577		158.0	3.0	98	17.9	226.0	6.0	97	25.5	7.3	.4	93	.7
DEC	11.980	.386	.542		124.0	16.0	87	12.9	192.0	24.0	87	20.1	6.0	.9	85	.6
TOTAL	126.978							164.7				242.2				7.2
AVERAGE		.348	MAXIMUM .993	MAXIMUM	140.4	7.6	94		204.0	9.8	95		7.0	.7	90	
NO. OF SAMPLES					22	13			22	13			22	13		

Ministry of the Environment
Ontario

West Central Region

(2)

REGIONAL OFFICE

STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES

Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

SUB-OFFICE

Simcoe
645 Norfolk St. N.
519-426-1940

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

ELORA

PROJECT Village of Elora WPCP

PROJECT NO.	2-0125-62
TREATMENT	Extended Aeration
DESIGN FLOW	0.083 mgd
DESIGN POPULATION	1,000
BOD - Raw Sewage	210 mg/l
SS - Raw Sewage	250 mg/l

PRETREATMENT

Screening (at pumping station)

- Two coarse bar screens

Pumps - Robert Morse

- Two 300 gpm (electric) @ 47' tdh

Grit Removal

Type: Grit channels
Size: Two 10' x 2'

SECONDARY TREATMENT

Aeration Tanks

Type: Single-pass
Size: Two 32' x 20' x 11' (14,100 cu ft or 87,800 gal)
Retention: 25.4 hr

Air Supply

Type: Sutorbilt; variable speed pulley
Size: Two 183-370 cfm each

Diffusers

Type: Spargers
Size: 16 per tank @ 2' centres

Secondary Sedimentation

Type: Walker Process
Size: Two 26' x 6' x 7'9" deep (7,500 gal)
Retention: 4.3 hr
Loading: Surface, 266 gal/ft^2/day
Weir, 1,500 gal/ft/day

CHLORINATION

Type: Wallace & Tiernan V-100

Chlorine Contact Chamber

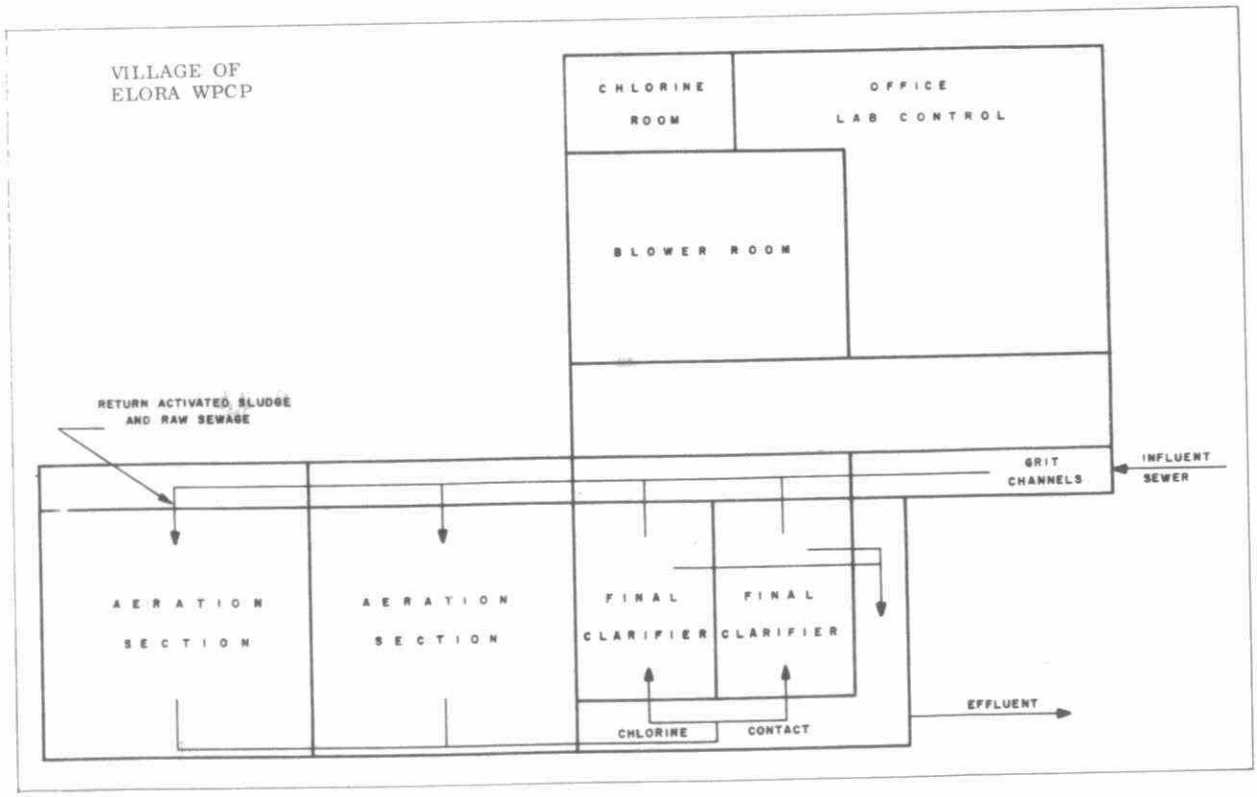
Size: 13' x 5' x 6' deep (2,180 gal)
Retention: 37.7 min

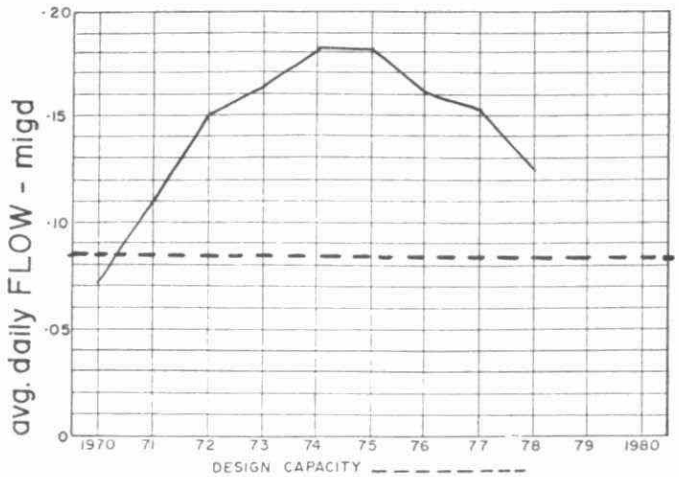
OUTFALL

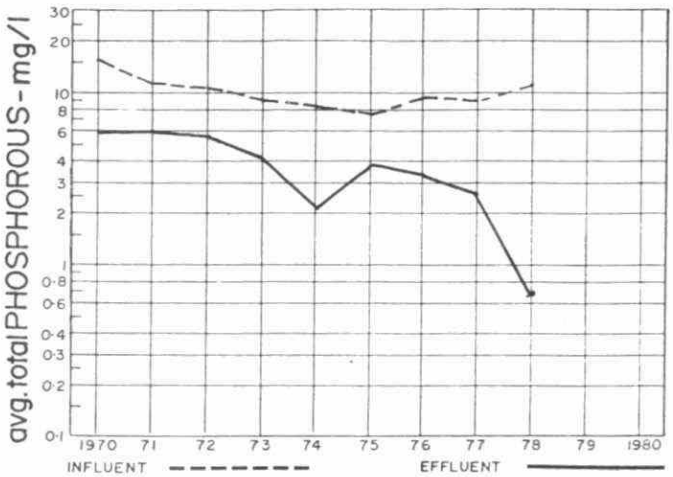
- 12" dia pipe to Grand River

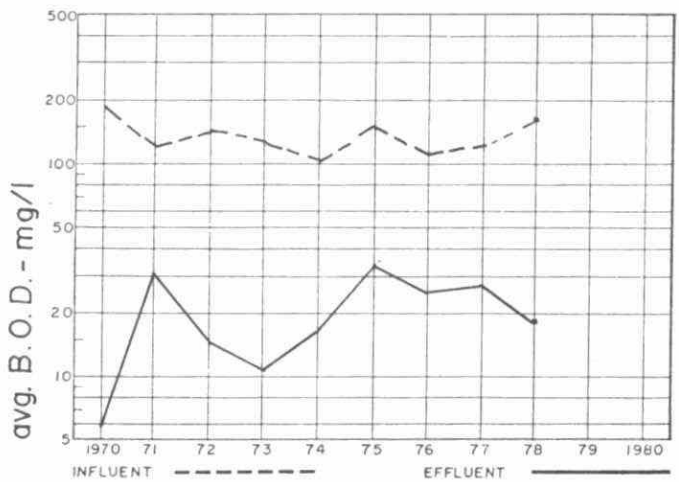
SLUDGE HANDLING

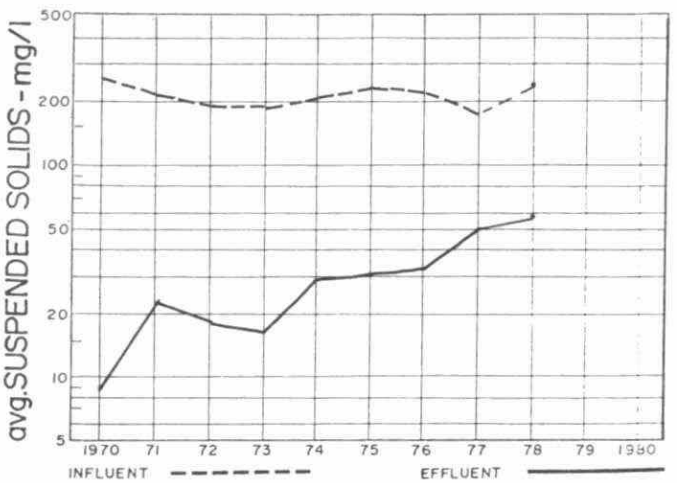
Type: Thickening tank
Size: 27' x 20' 8" x 11' 9" (avg)
(6,750 cu ft or 42,000 gal)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000178 ELORA W P C P

MUNICIPALITY : ELORA
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,476

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

* DATA NOT AVAILABLE

DESIGN CAPACITY : 0.083 MIGD DESIGN BOD5 : 210.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	*	*			*	7.0			*	124.0			*	.9		
FEB	*	*			175.0	43.0	75		270.0	68.0	74		10.3	1.3	87	
MAR	*	*			150.0	20.0	86		230.0	74.0	67		8.3	.1	98	
APR	*	*			60.0	28.0	53		112.0	30.0	73		5.5	.9	83	
MAY	*	*			95.0	30.0	68		115.0	60.1	47		6.2	.6	90	
JUN	4.440	.148	.177		110.0	5.5	95	4.6	205.0	48.4	76	6.9	10.0	.6	94	.4
JUL	3.393	.109	.137		210.0	25.0	88	6.2	125.0	38.7	69	2.9	12.0	.8	93	.3
AUG	3.388	.109	.176		305.0	14.0	95	9.8	785.0	57.6	92	24.6	29.6	.4	98	.9
SEP	3.630	.121	.220		160.0	9.0	94	5.4	265.0	90.0	66	6.3	8.4	.8	90	.2
OCT	3.706	.120	.177		160.0	28.0	82	4.8	215.0	31.0	85	6.8	10.0	.7	93	.3
NOV	4.326	.144	.200	.300	280.0	10.0	96	11.6	245.0	50.3	79	8.4	10.0	.8	92	.3
DEC	4.834	.155	.189	.300	140.0	16.0	88	5.9	130.0	40.8	68	4.3	6.9	1.0	85	.2
TOTAL	27.717							48.3				60.2				2.6
AVERAGE		.129	MAXIMUM .220	MAXIMUM .300	167.7	19.6	88		245.1	59.4	75		10.6	.7	93	
NO. OF SAMPLES					13	17			13	183			13	180		

HALDIMAND (CAYUGA)

Project: Haldimand-Norfolk (Cayuga) WPCP

Project No: 1-0043-66

DESIGN FLOW

200, 000 gpd

GRIT REMOVAL

Type: Manually cleaned channels
Size: Two 18'6" x 1'6" x 2'6" deep

AERATION TANK

Type: Oxidation ditch with one Pumps & Softeners Ltd. rotor
Size: 23, 400 cu. ft. or 146, 000 gal.
Detention: 65 hr
Flow Velocity: 1 fps (min)

FINAL CLARIFIER

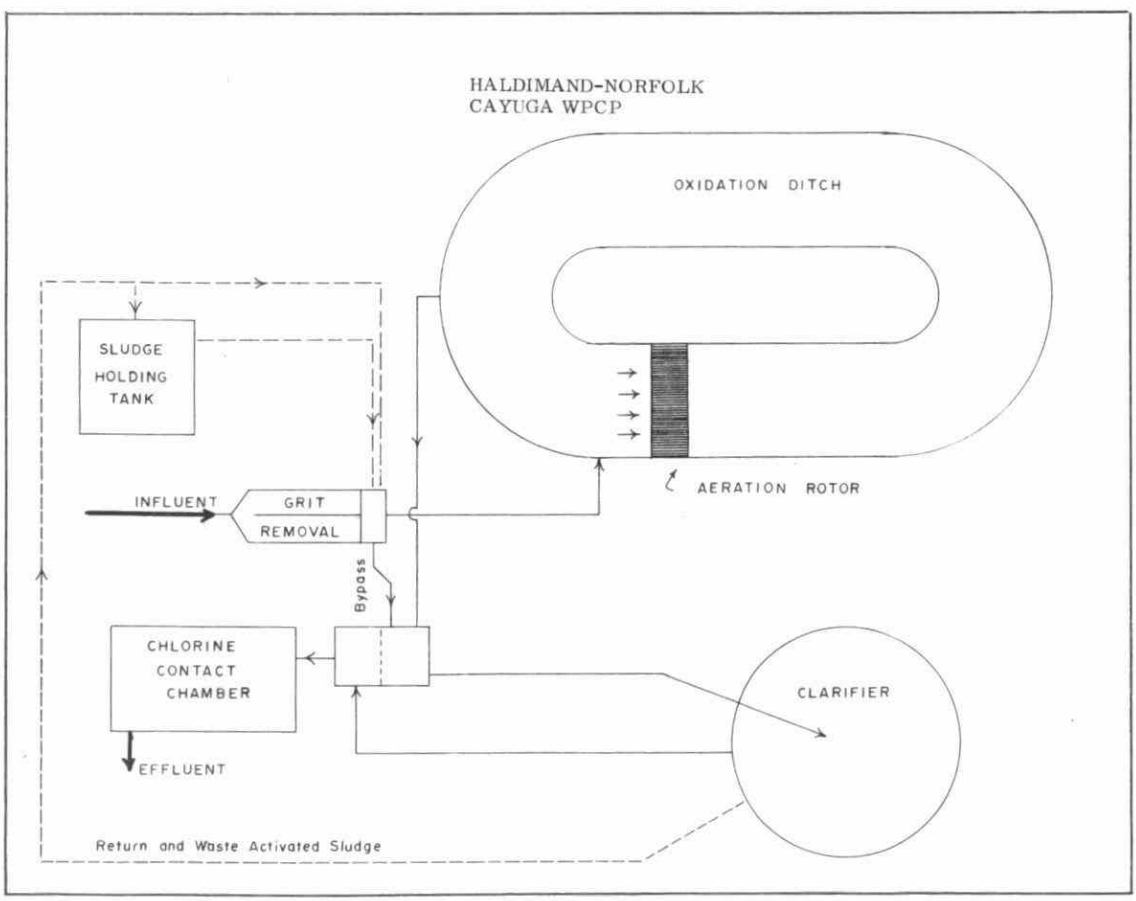
Type: Dorr-Oliver
Size: One 24' dia x 12' swd (33, 800 gal) overflow rate at design capacity 440 gal/ ft^2/day

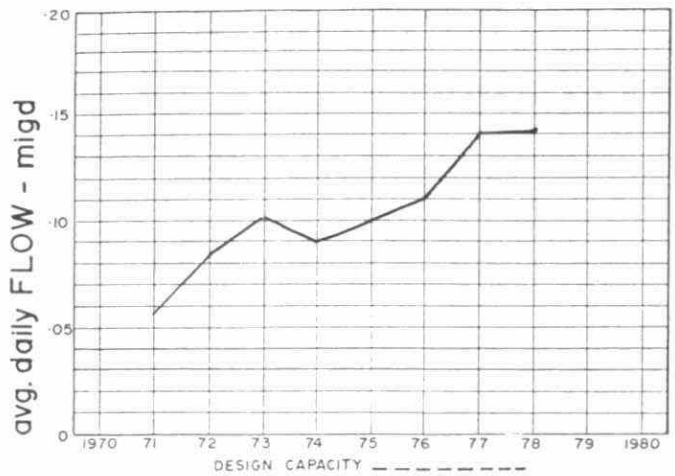
CHLORINATION

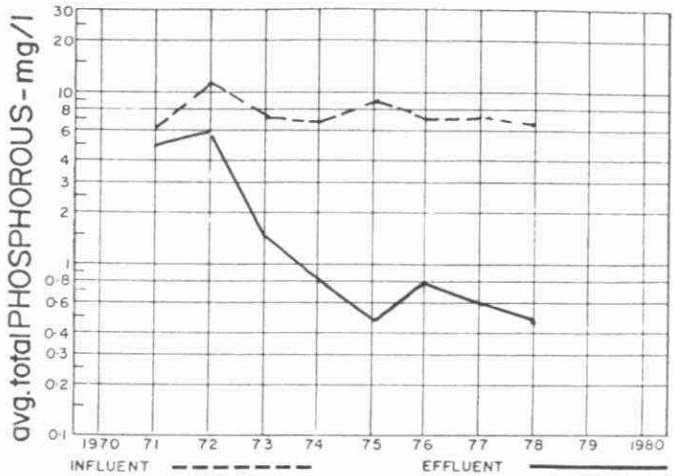
Type: Gas
Size: 50 lb/day

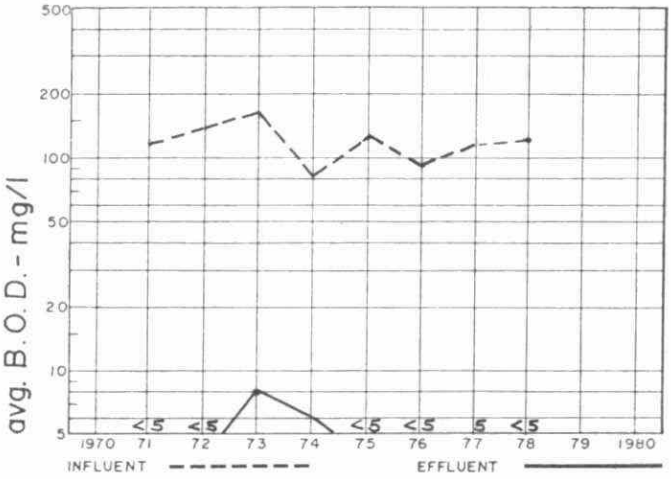
CONTACT TANK

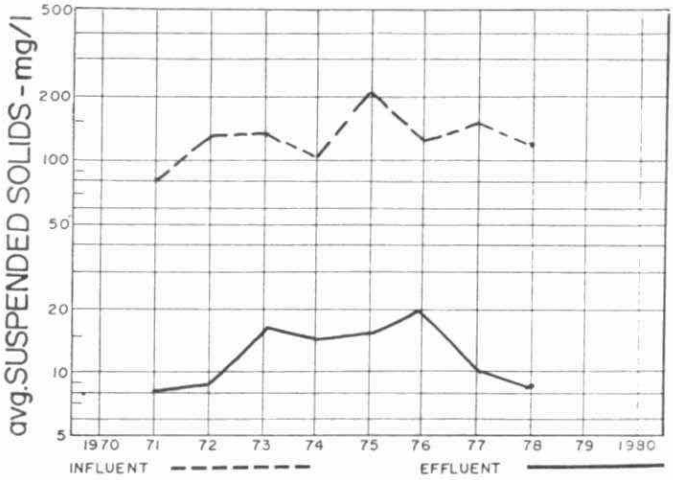
Size: 4750 gal
Detention: 34 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000089 CAYUGA WPCP

MUNICIPALITY : HALDIMAND (CAYUGA)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 16,427

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.588	.116	.330		160.0	3.0	98	5.6	145.0	5.0	96	5.0	8.2	2.0	75	.2
FEB	2.258	.081	.099		110.0	2.0	98	2.4	95.0	10.0	89	1.9	6.4	.3	95	.1
MAR	7.915	.255	.738		110.0	1.4	98	8.5	105.0	11.0	89	7.4	5.4	.4	92	.3
APR	6.125	.204	.352		80.0	3.1	96	4.7	95.0	10.5	88	5.1	4.4	.4	90	.2
MAY	3.382	.109	.214		120.0	2.5	97	3.9	119.0	6.0	94	3.8	6.7	.3	95	.2
JUN	2.882	.096	.156		120.0	3.0	97	3.3	120.0	12.0	90	3.1	7.8	.5	93	.2
JUL	3.520	.114	1.814		120.0	2.2	98	4.1	132.0	6.0	95	4.4	8.3	.4	95	.2
AUG	3.815	.123	.377		170.0	3.0	98	6.3	135.0	5.0	96	4.9	8.1	.4	95	.2
SEP	3.877	.129	.469		120.0	1.2	99	4.6	165.0	7.5	95	6.1	6.6	.5	92	.2
OCT	5.324	.172	.415		80.0	.9	98	4.2	118.0	12.5	89	5.6	5.7	.1	98	.2
NOV	3.760	.125	.228		95.0	.8	99	3.5	150.0	7.0	95	5.3	6.5	.4	93	.2
DEC	4.681	.151	.424		65.0	1.8	97	2.9	107.0	15.0	85	4.3	4.3	.7	83	.1
TOTAL	51.127							54.0				56.9				2.3
AVERAGE		.140	MAXIMUM 1.814	MAXIMUM	112.5	2.0	98		123.8	8.9	92		6.5	.5	91	
NO. OF SAMPLES					17	18			17	17			17	18		

PARIS

PROJECT Town of Paris WPCP

PROJECT NO.	2-0034-59
TREATMENT	Extended Aeration
DESIGN FLOW	0.50 mgd
DESIGN POPULATION	3,600
BOD - Raw Sewage	200 mg/l
SS - Raw Sewage	170 mg/l

PRETREATMENT

Grit Removal

Type: Channel; manually cleaned
Size: Two 25 X $2\frac{1}{2}$ X $2\frac{1}{2}$'

Comminution

Type: Jones & Atwood (1)

RAW SEWAGE PUMP

Type: Worthington
Size: Two 335 gpm @ 12' tdh

SECONDARY TREATMENT

Aeration Tanks

Type: Mechanical; single-pass
Size: Two 96 X 32 X 10' (372,000 gal)
Retention: 17.9 hr

Aerators

- Ames Crosta (6)

Secondary Sedimentation

Type: Dorr
Size: Two 36 X 36 X 9' swd (145,000 gal)
Retention: 3.5 hr
Loading: Surface, 193 gal/ft^2/day
Weir, 1736 gal/ft/day

CHLORINATION

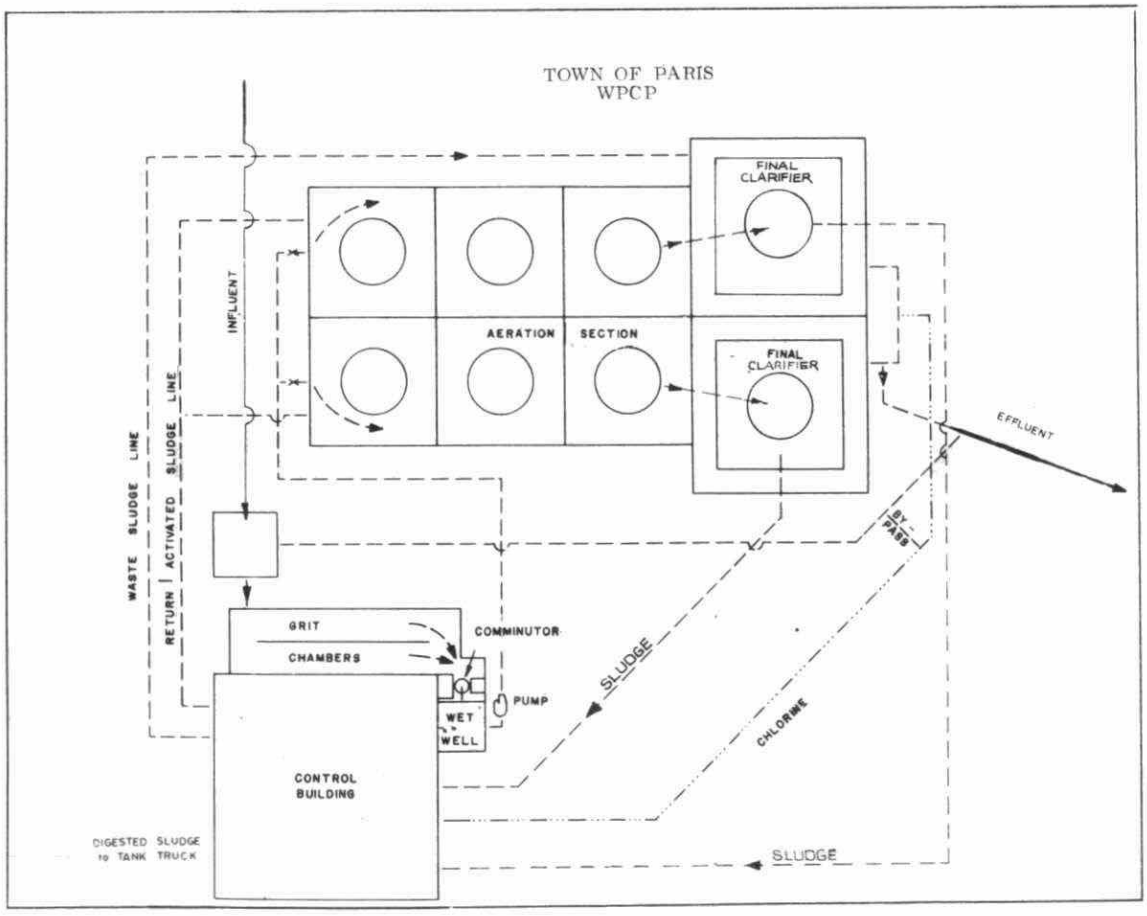
Type: W & T
Size: One 400 lb/day

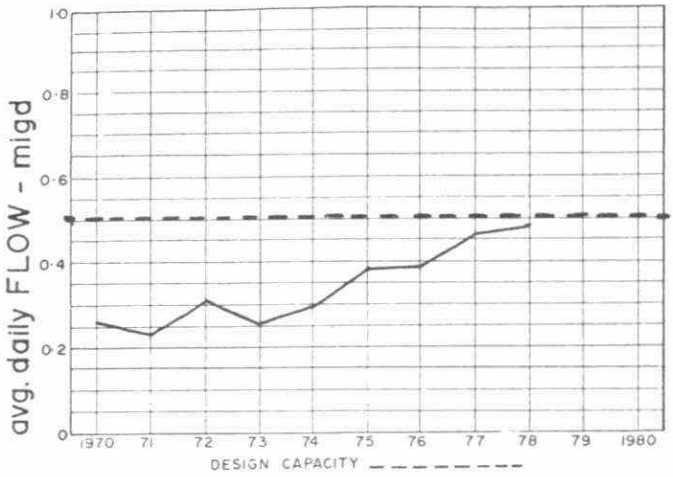
Chlorine Contact Chamber

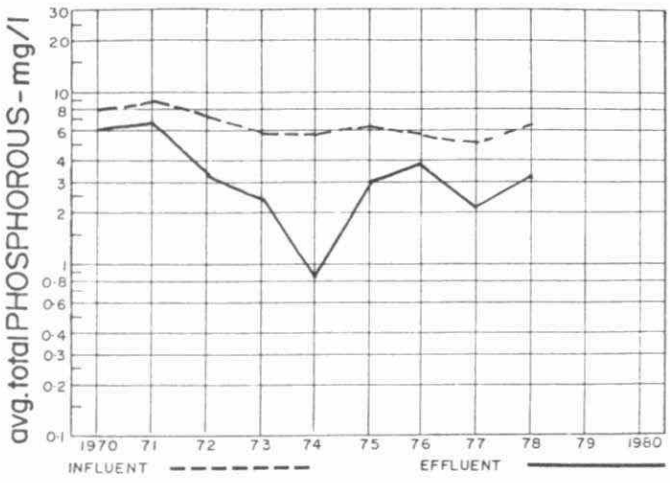
- in outfall

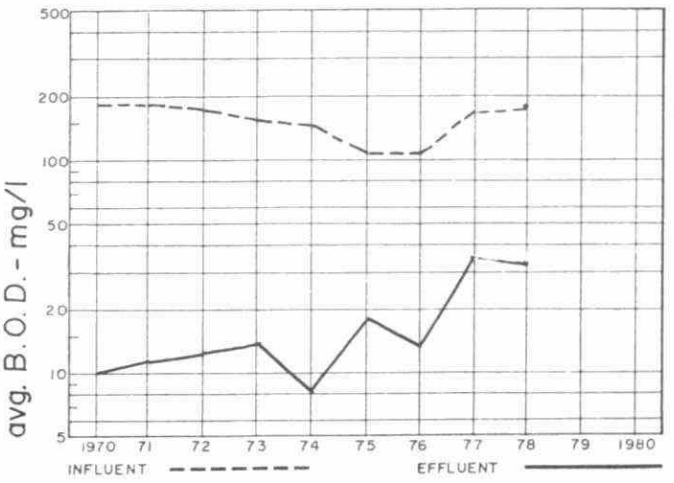
OUTFALL

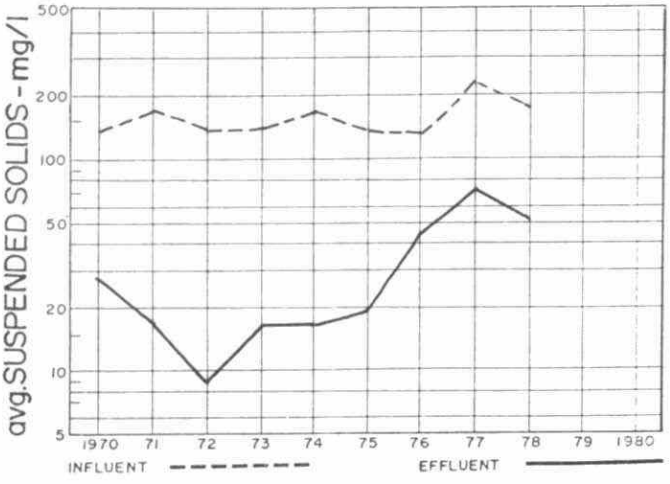
- to Grand River











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001097 — PARIS WPCP

MUNICIPALITY : PARIS
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 7,048

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.500 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 170.0 MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS --->				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	13.510	.440	.570	.980	225.0	96.0	57	17.4	237.0	161.0	32	10.2	5.5	6.5	-	-
FEB	11.230	.400	.500	.900	*	*			*	*			*	*		
MAR	14.740	.560	.980	1.000	170.0	32.0	81	20.3	175.0	34.0	80	20.7	5.0	1.7	66	.4
APR	17.490	.582	.921	1.400	200.0	28.0	86	30.0	219.0	58.0	73	28.1	5.3	*		
MAY	15.255	.492	.625	.980	193.0	21.4	88	26.1	157.0	30.8	80	19.2	6.6	2.6	60	.6
JUN	13.618	.453	.569	.980	215.0	34.2	84	24.6	191.0	46.5	75	19.6	6.7	3.1	53	.4
JUL	12.679	.409	.566	.960	204.0	10.7	94	24.5	221.0	39.8	81	22.9	7.6	*		
AUG	11.965	.385	.516	.980	188.0	29.5	84	18.9	176.0	40.0	77	16.2	7.4	*		
SEP	12.520	.417	.540	1.000	131.0	18.8	85	14.0	147.0	29.7	79	14.6	6.4	2.9	54	.4
OCT	12.547	.404	.509	.900	159.0	16.6	89	17.8	188.0	39.2	79	18.6	8.0	*		
NOV	12.337	.411	.484	.980	191.0	40.2	78	18.6	168.0	51.7	69	14.3	7.5	3.4	54	.5
DEC	12.946	.417		.980	144.0	25.9	82	15.2	120.0	34.3	71	11.0	5.7	1.7	70	.5
TOTAL	160.837							227.4				195.4				2.8
AVERAGE		.448	MAXIMUM .980	MAXIMUM 1.400	183.6	32.1	82		181.7	51.3	71		6.5	3.1	51	
NO. OF SAMPLES					43	33			45	33			44	15		

PROJECT: Wellesley Twp. WPCP

PROJECT NO. 1-0178-68

TREATMENT: Contact Stabilization plant operated as Extended Aeration

DESIGN FLOW: 0.11 mgd

BOD - Raw Sewage 200 mg/l
- Removal 93%

SS - Raw Sewage 250 mg/l
- Removal 94%

RAW SEWAGE PUMPS
Size: Two, each 320 USgpm @ 27'TDH

GRIT REMOVAL FACILITIES
None

COMMINUTOR
Type: One, Worthington 12c4
Size; "A"
(bar screen in bypass channel)

BIOLOGICAL TREATMENT

CONTACT TANK
Volume: 12,200 I.G.
Retention: 2.7 hr

REAERATION
Volume: 25,400 I.G.
Retention: 5.5 hr

BLOWERS
Type: Three, Roots 67RAI
Size: each 1530 rpm

CLARIFIER
Size: 23' dia.x15.5'awd
Volume: 34,900 I.G.
Retention: 7.6 hr

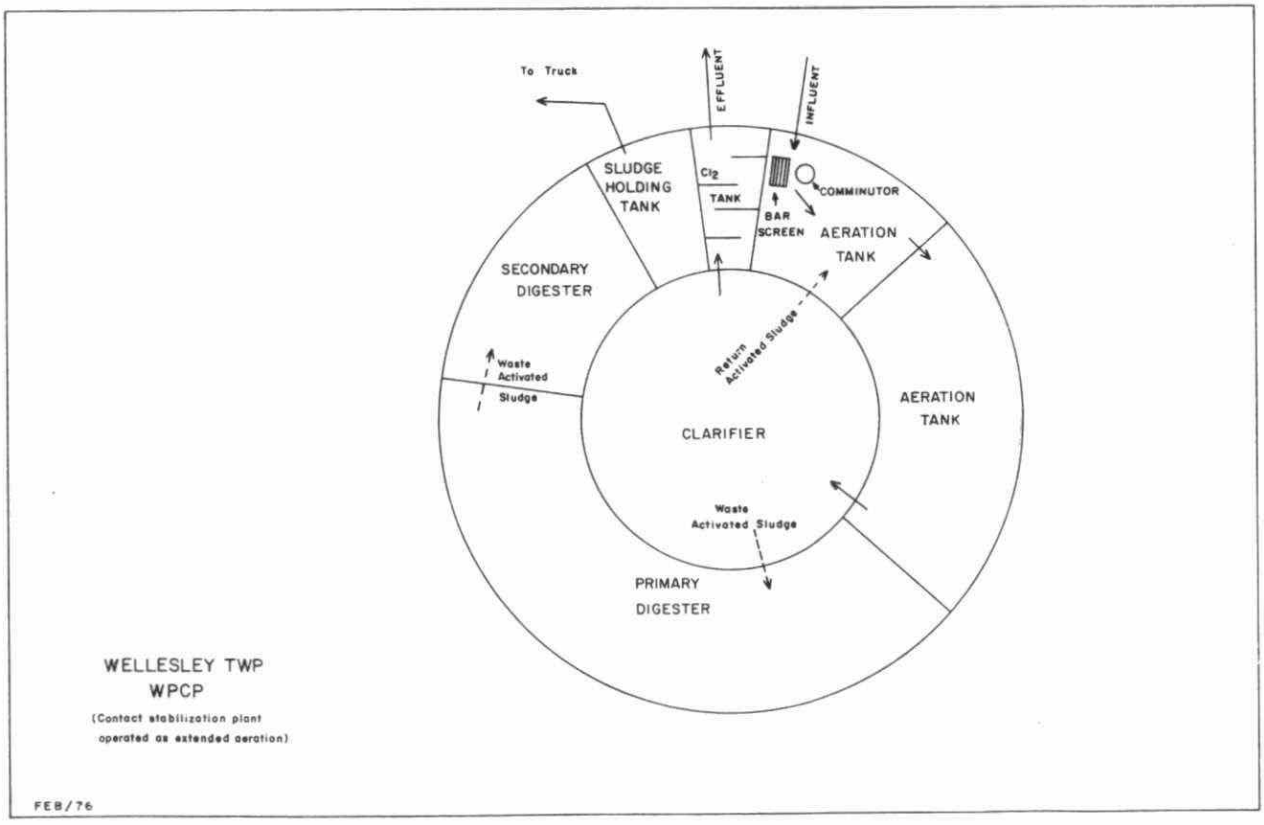
AEROBIC DIGESTER 1
Volume: 44,900 I.G.

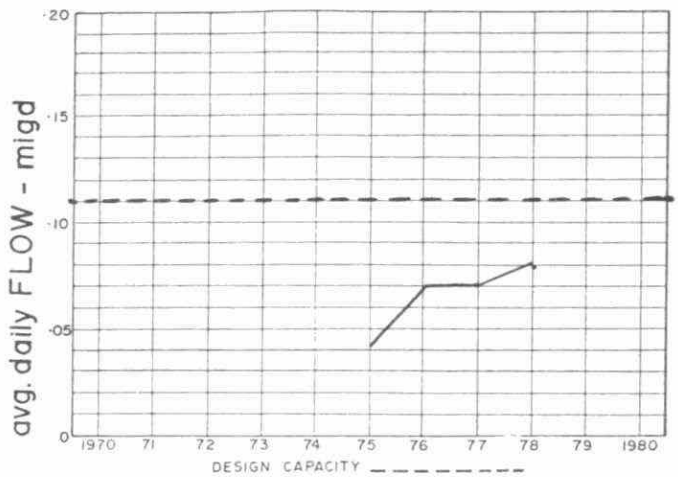
AEROBIC DIGESTER 2
Volume: 15,900 I.G.

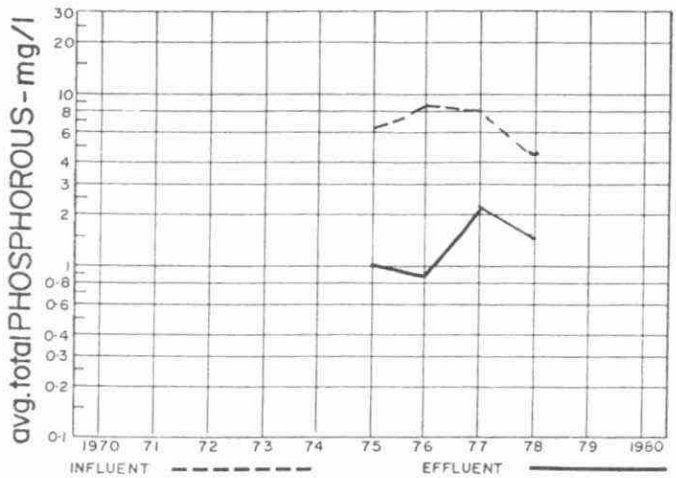
SLUDGE HOLDING TANK
Volume: 6,700 I.G.

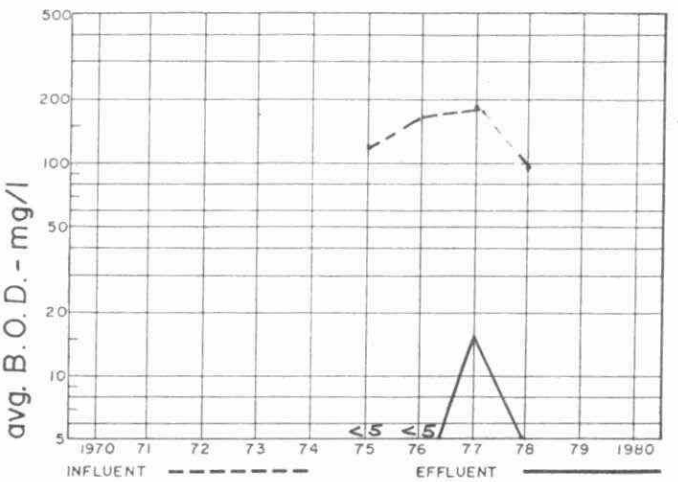
CHLORINE CONTACT CHAMBER
Volume: 4,890 I.G.
Retention: 1.1 hr

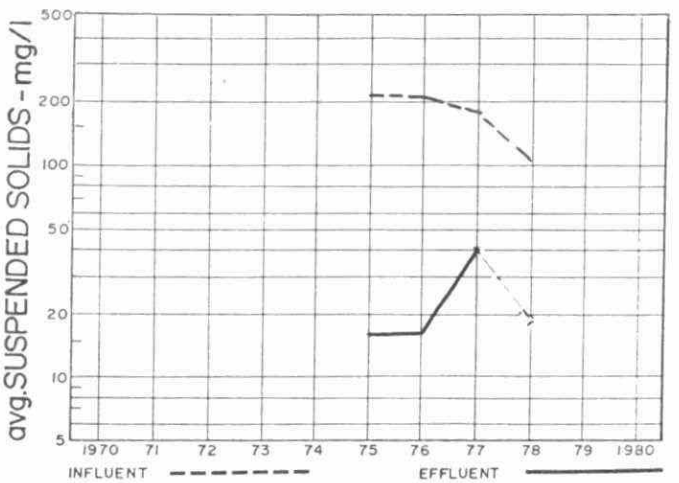
CHLORINATOR
Type: One F and P











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001578 — WELLESLEY WPCP

MUNICIPALITY : WELLESLEY
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

* DATA NOT AVAILABLE

CURRENT POPULATION : 6,531

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.110 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	2.015	.065	.096		300.0	7.0	97	5.9	173.0	26.0	84	2.9	9.0	3.7	58	.1
FEB	1.554	.062	.080		*	*			110.0	29.0	73	1.2	*	*		
MAR	3.104	.100	.192		80.0	6.0	92	2.2	92.0	30.0	67	1.9	4.1	2.3	43	
APR	5.552	.185	.448		78.0	6.0	92	3.9	86.0	23.5	72	3.4	3.2	1.6	50	
MAY	2.464	.079	.128		85.0	6.3	92	1.9	113.0	37.0	67	1.8	5.4	1.1	79	.1
JUN	1.837	.061	.093	.159	212.0	3.2	98	3.8	148.0	7.4	95	2.5	5.5	.7	87	
JUL	1.695	.055	.071	.129	94.0	6.5	93	1.4	115.0	14.5	87	1.7	8.6	3.5	59	
AUG	1.637	.052	.068	.440	33.0	3.5	89	.4	94.0	16.1	82	1.2	3.9	2.2	43	
SEP	2.064	.069	.123	.563	19.0	3.8	80	.3	43.0	12.3	71	.6	1.6	.6	62	
OCT	2.136	.069	.112	.176	153.0	4.0	97	3.1	100.0	12.0	88	1.8	4.7	.6	87	
NOV	2.232	.074	.115	.190	18.0	3.0	83	.3	26.0	15.0	42	.2	1.8	.7	61	
DEC	2.848	.092	.151	.223	12.0	6.0	50	.1	133.0	13.3	90	3.4	1.4	.8	42	
TOTAL	29.138							23.3				22.6				.2
AVERAGE		.080	MAXIMUM .448	MAXIMUM .563	98.5	5.0	94		102.7	19.6	80		4.4	1.6	63	
NO. OF SAMPLES					19	21			49	42			23	21		

WILMOT (BADEN)

PROJECT: Wilmot Twp (Baden) WPCP

PROJECT NO. 1-0036-66

TREATMENT: Extended Aeration

DESIGN FLOW: 0.203 MIGD

BOD - Raw Sewage - 493 lb/day

SS - Raw Sewage - 620 lb/day

PRETREATMENT

RAW SEWAGE PUMPS

Type: Two, Crane STF centrifugal
Size: each 480 gpm @ 38' TDH

GRIT CHANNELS
Size: Two, each 1.5' x 19' x 2.2'
Volume: (each) 390 I.G.
Retention (one): 2.8 min

COMMINUTOR
Type: Heligear HTMI
Size: 50 rpm

BIOLOGICAL TREATMENT

AERATION TANK
Volume: 222,000 I.G.
Retention: 26.2 hr

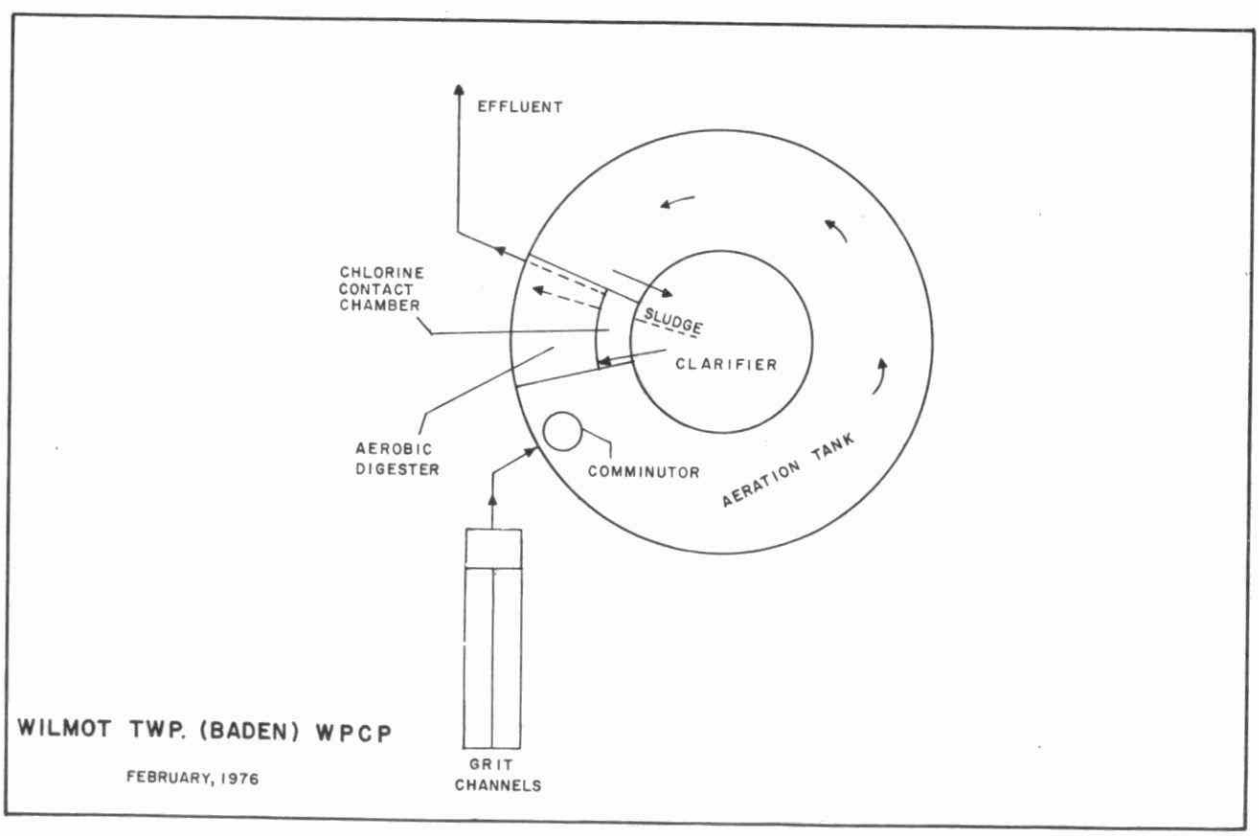
CLARIFIER
Size: 27' i.d. x 12.8' awd
Volume: 46,900 I.G.
Retention: 5.5 hr
Loading -
- Surface: 382/I.G./ft^2/day
- Weir: 2484 I.G/ft/day

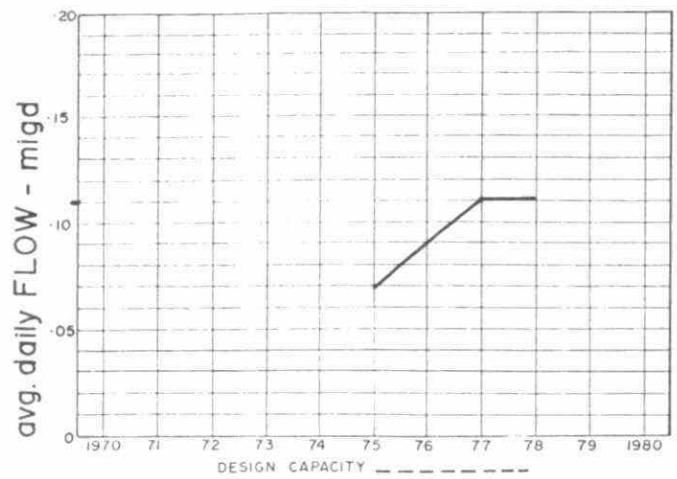
BLOWERS
Type: Three, Roots 76RA1

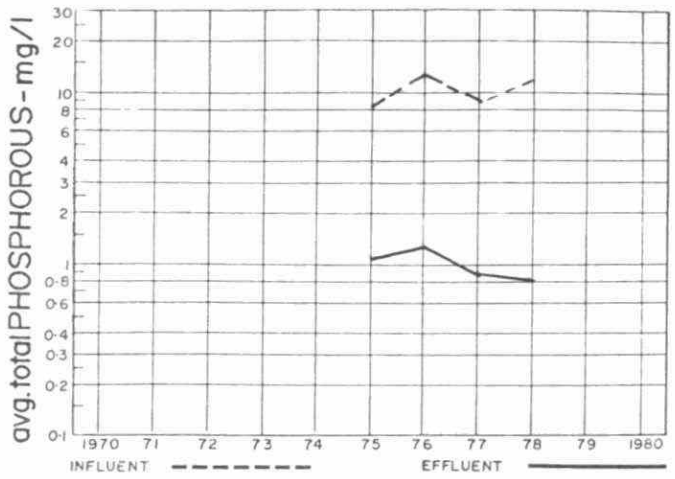
AEROBIC DIGESTER
Volume: 19,000 I.G.

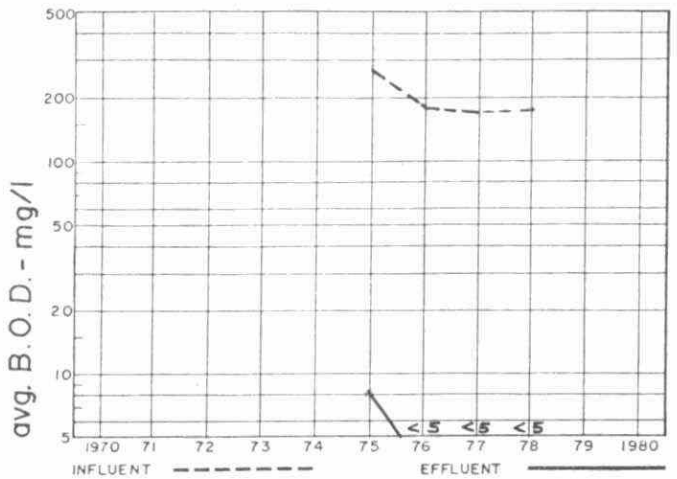
CHLORINE CONTACT CHAMBER
Volume: 4700 I.G.
Retention: 33 min

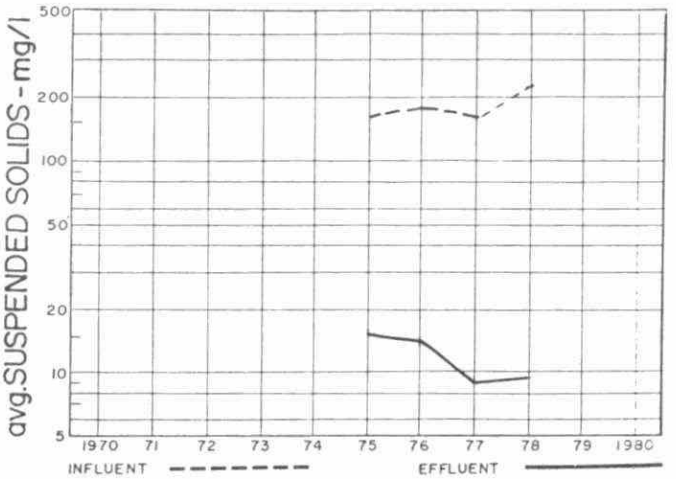
CHLORINATOR
Type: W and T v-800
Size: 50 lb/day











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001710 — BADEN WPCP

MUNICIPALITY : WILMOT BADEN
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 10,731

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.203 MIGD — DESIGN BOD5 : 493.0 MG/L — DESIGN SUSP.SOLIDS : 620.0 MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.142	.101	.116	.245	240.0	5.0	97	7.3	208.0	15.0	92	6.0	11.5	.6	94	.3
FEB	2.605	.093	.104	.195	165.0	2.0	98	4.2	200.0	15.0	92	4.8	12.0	.7	94	.2
MAR	4.384	.141	.235	.355	170.0	3.0	98	7.3	195.0	9.0	95	8.1	14.5	.8	94	.6
APR	5.666	.189	.306	.610	140.0	1.7	98	7.8	137.0	9.0	93	7.2	11.5	.6	94	.6
MAY	3.887	.125	.173	.555	113.0	1.7	98	4.3	160.0	10.0	93	5.8	7.6	.9	88	.2
JUN	2.835	.094	.128	.240	240.0	2.0	99	6.7	840.0	5.0	99	23.6	15.0	.8	94	.4
JUL	2.188	.071	.107	.220	207.0	2.4	98	4.4	200.0	11.7	94	4.1	13.3	.7	94	.2
AUG	2.451	.079	.089	.210	200.0	.8	99	4.8	228.0	15.0	93	5.2	11.5	1.2	89	.2
SEP	3.341	.111	.210	.630	180.0	1.1	99	5.9	180.0	6.5	96	5.7	10.5	.9	91	.3
OCT	3.141	.101	.138	.250	205.0	1.5	99	6.3	165.0	5.0	96	5.0	11.5	1.0	91	.3
NOV	3.078	.103	.141	.260	130.0				170.0				13.0	.8	93	.3
DEC	3.485	.112	.283	.600	210.0	1.2	99	7.2	150.0	5.0	96	5.0	7.6	.7	90	.2
TOTAL	40.203							66.2				80.5				3.8
AVERAGE		.110	MAXIMUM .306	MAXIMUM .630	183.3	2.0	98		236.0	9.6	95		11.6	.8	93	
NO. OF SAMPLES					21	20			21	19			21	90		

Ministry of the Environment
Ontario

Central Region

③

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386

Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

ALLISTON (T) WPCP

PROJECT NO. 1-0074-67
Design Capacity 0·77 MGD
Design BOD 155 mg/l
Design SS 200 mg/l

PRETREATMENT

GRIT CHANNELS:

Two, each 2.5' x 25.0' x 2.5' swd
Detn: 3.6 min at Des. MGD

COMMINUTOR:

SALA 15" 37.5 Rpm powered by
3/4 HP motor

BAR SCREEN:

in one Grit channel

BIOLOGICAL TREATMENT

AERATION TANKS:

Two, 58.0' dia. x 15.0' swd
Volume: (total) 461,390 I. gal. Detn: 14.4 hr.
Aerators: Two AMES-CROSTA type - 60
with 25 HP motor.

SECONDARY CLARIFIERS:

35.0' dia x 10.0' swd
Volume (total) 120,000 I. gal. Detn: 3.7 hr.
Overflow rate 450 gpd 1 ft^2.

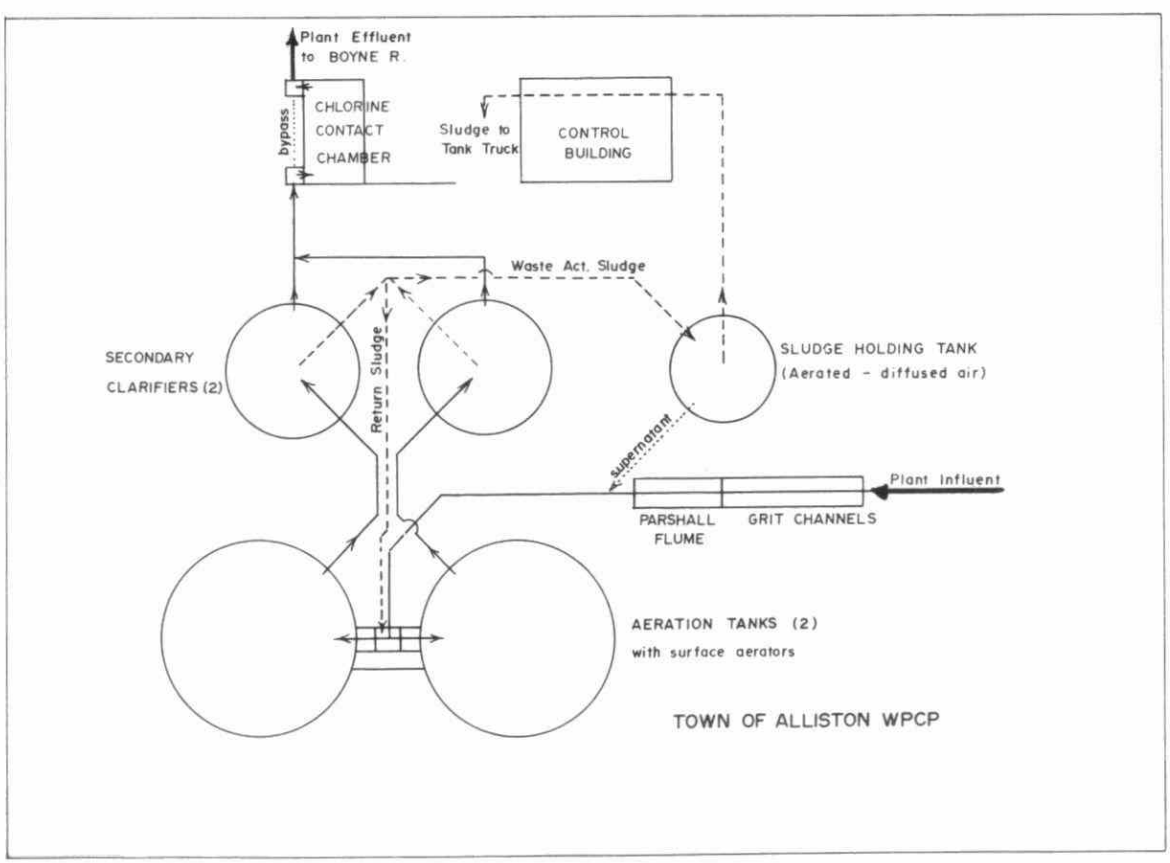
CHLORINE CONTACT CHAMBER:

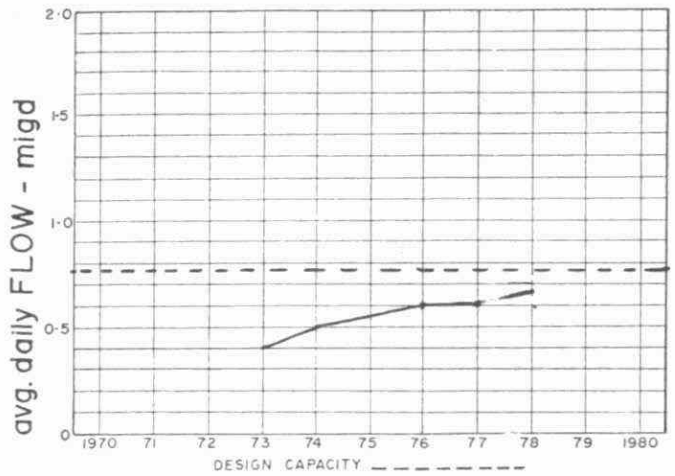
5 passes, each pass 3.6' x 15.0' x 6.75' swd
Volume (total) 11370 I. gal. Detn: 21 min.
Chlorinator: W & T model A-741

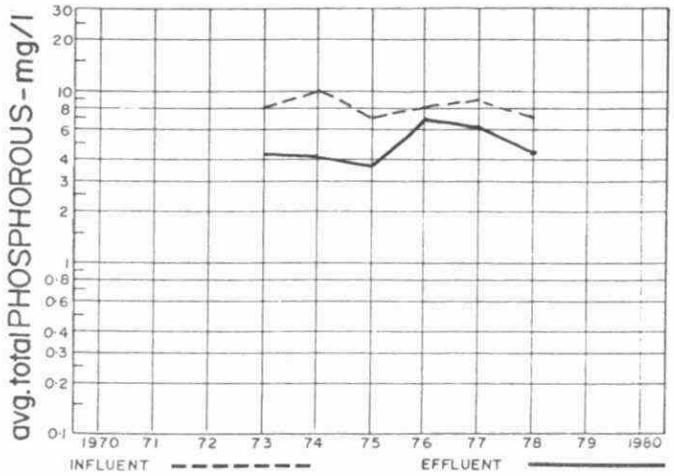
SLUDGE DISPOSAL

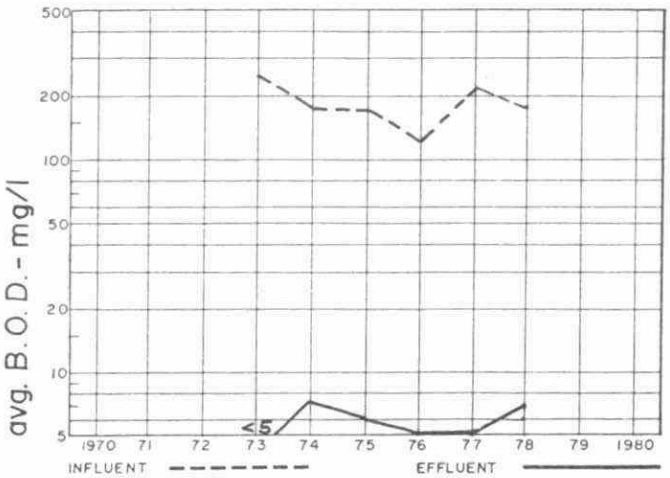
SLUDGE HOLDING TANK:

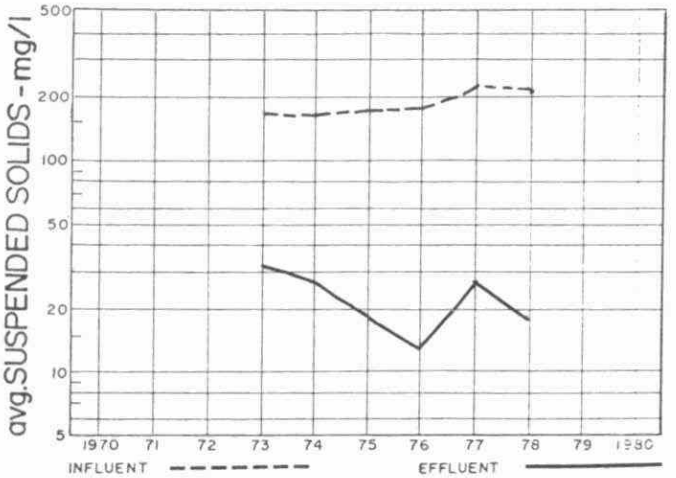
16.0' dia. x 16.0' swd
Volume 21,200 I. gal.
Sludge pump: CARTER Series 800 plunger
75 USGPM at 60' TDH powered by 3 HP motor.
Blower: SUTORBILT Mod. 3HV13











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001220 — ALLISTON WPCP

MUNICIPALITY : ALLISTON
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 4,675

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.770 MIGD — DESIGN BOD5 : 155.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	18.341	.592	.692	1.342	220.0	20.0	90	36.6	240.0	52.0	78	34.4	16.3	5.9	63	1.9
FEB	15.764	.563	.645	1.059	150.0	15.0	90	21.2	217.0	30.0	86	29.4	5.6	4.7	16	.1
MAR	20.572	.664	.866	2.000	280.0	5.0	98	56.5	290.0	11.0	96	57.3	5.8	2.9	50	.5
APR	22.617	.754	.950	1.690	140.0	6.0	95	30.3	155.0	13.0	91	32.1	6.0	3.0	50	.6
MAY	21.554	.695	.906	1.892	95.0	4.5	95	19.5	164.0	21.0	87	30.8	8.8	3.4	61	1.1
JUN	19.141	.639	.769	2.000	180.0	8.0	95	32.9	156.0	14.0	91	27.1	5.5	4.9	10	.1
JUL	16.490	.532	.733	1.112	180.0	8.0	95	28.3	348.0	14.0	95	55.0	5.5	4.9	10	
AUG	19.536	.630	.803	2.200	340.0	3.5	98	65.7	175.0	15.0	91	31.2	5.9	3.6	38	.4
SEP	17.400	.580	.816	2.200	240.0	2.2	99	41.3	215.0	7.0	96	36.1	6.3	5.9	6	
OCT	17.211	.555	.736	1.936	140.0	3.0	97	23.5	194.0	18.0	90	30.2	8.6	4.8	44	.6
NOV	16.182	.539	.642	1.188	120.0	3.5	97	18.8	170.0	25.0	85	23.4	6.0	4.8	20	.1
DEC	16.444	.530	.643	1.056	160.0	3.0	98	25.8	283.0	13.8	95	44.2	6.8	6.3	7	
TOTAL	221.252							400.4				431.2				5.4
AVERAGE		.606	MAXIMUM .950	MAXIMUM 2.200	187.0	6.8	96		217.2	19.4	91		7.2	4.5	36	
NO. OF SAMPLES					12	12			66	66			12	12		

COLDWATER

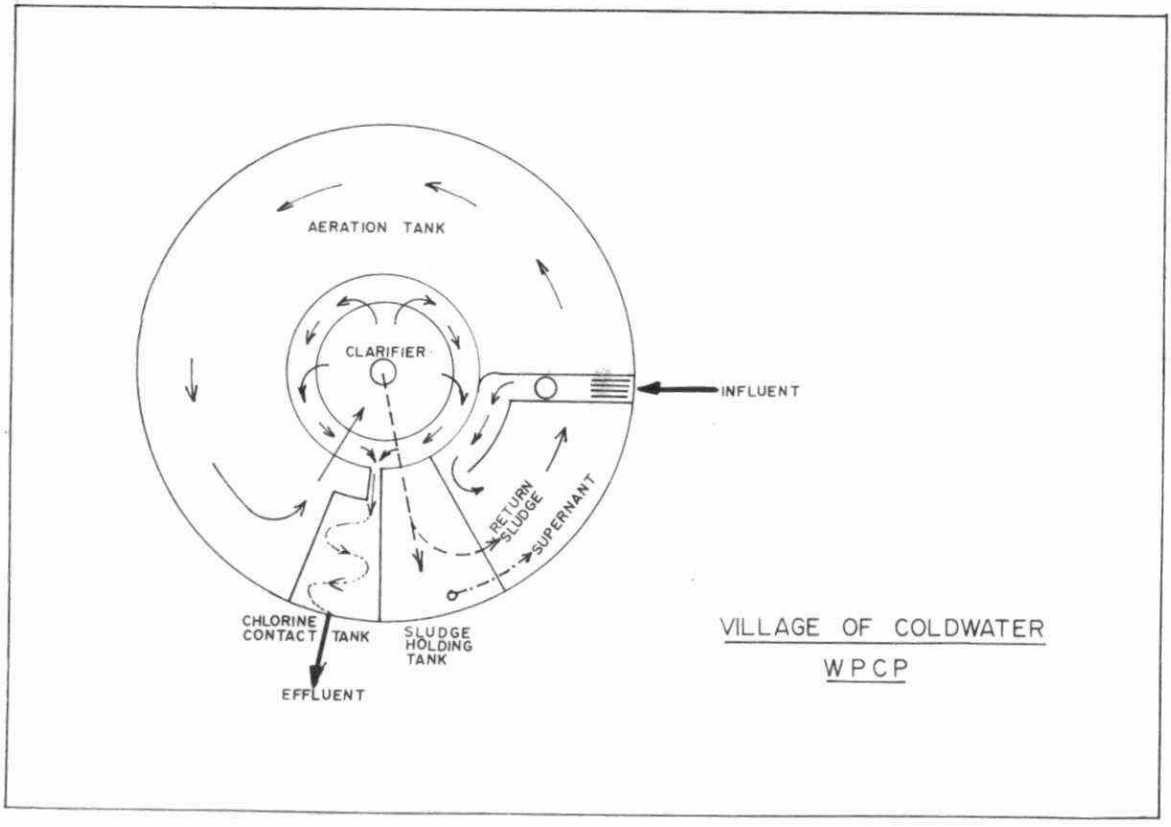
PROJECT	Village of Coldwater
PROJECT NO.	1-0020-66
TREATMENT	Extended Aeration
DESIGN FLOW	0.120 mgd
BOD - Raw Sewage	170 mg/l
SS - Raw Sewage	200 mg/l

PUMPING STATIONS

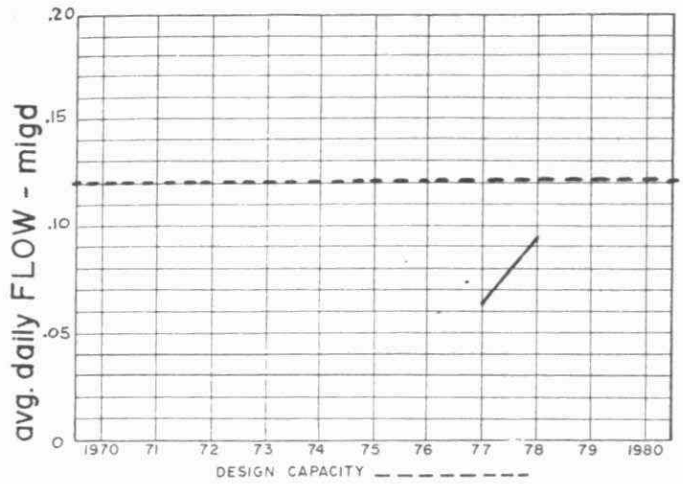
No. 1- 2 submersible pumps plus one standby @ 248 Igpm when two running

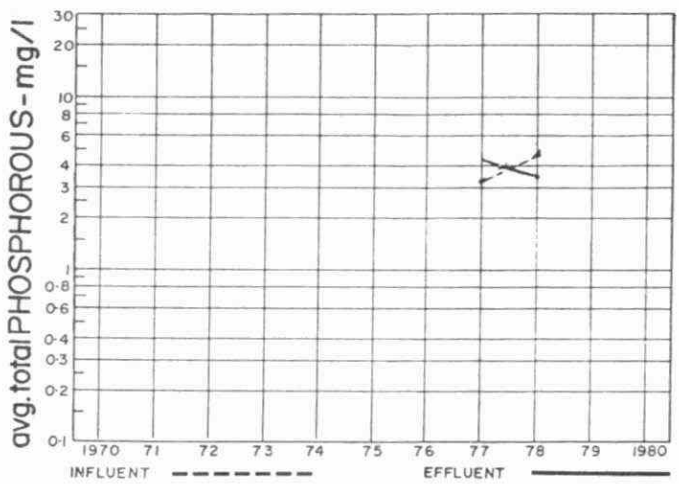
No. 2- 2 submersible pumps @ 227 Igpm each

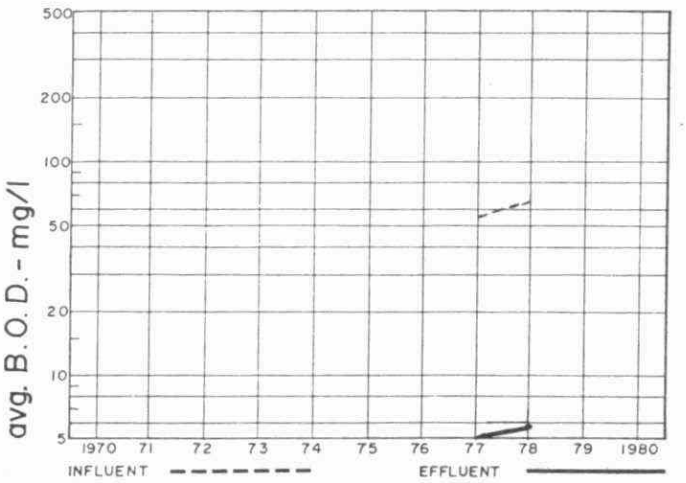
No. 3- 1 submersible pump @ 81.4 Igpm

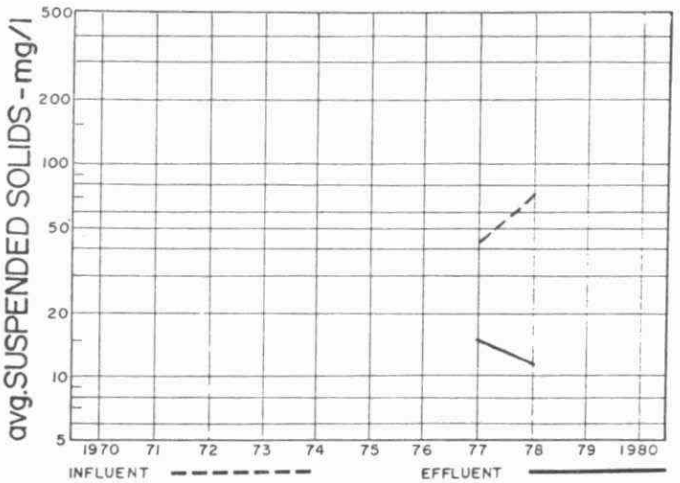


VILLAGE OF COLDWATER
WPCP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001596 — COLDWATER WPCP

MUNICIPALITY : COLDWATER
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 804

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.120 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.743	.088	.118		85.0	2.5	97	2.2	80.0	6.0	92	2.0	6.6	2.9	56	.1
FEB	2.677	.096	.112		11.0	6.5	40	.1	22.0	12.0	45	.2	1.4	2.7	-	-
MAR	2.865	.092	.143		28.0	6.0	78	.6	28.0	12.0	57	.4	1.8	3.3	-	-
APR	3.808	.127	.181		50.0	2.5	95	1.8	55.0	11.0	80	1.6	4.1	2.0	51	
MAY	3.195	.103	.155		116.0	22.0	81	3.0	91.0	13.0	85	2.4	6.4	2.8	56	.1
JUN	2.374	.079	.115		90.0	3.5	96	2.0	102.0	5.0	95	2.3	7.4	3.4	54	
JUL	2.183	.070	.105		130.0	2.5	98	2.7	110.0	9.0	91	2.2	6.2	4.9	20	
AUG	2.026	.065	.095		28.0	8.0	71	.4	35.0	13.0	62	.4	2.8	5.7	-	-
SEP	2.274	.076	.091		20.0	5.0	75	.3	25.0	20.0	20	.1	2.0	3.2	-	-
OCT	2.794	.090	.116		10.0	5.0	50	.1	120.0	20.0	83	2.7	6.7	4.5	32	
NOV	3.389	.113	.172		110.0	2.0	98	3.6	70.0	6.0	91	2.1	7.3	3.5	52	.1
DEC	4.022	.130	.160		60.0	5.0	91	2.2	95.0	15.0	84	3.2	4.5	3.2	28	
TOTAL	34.350							19.0				19.6				.3
AVERAGE		.094	MAXIMUM .181	MAXIMUM	61.5	5.8	90		69.4	11.8	82		4.7	3.5	26	
NO. OF SAMPLES					12	12			12	12			12	12		

MILLBROOK

PROJECT Millbrook

PROJECT NO. 1-0067-67

TREATMENT Extended Aeration

DESIGN FLOW 0.250 MIGD

DESIGN BOD - 200 mg/l

DESIGN SS - 250 mg/l

SEWAGE PUMPING STATION

Three 320 IGPM submersible pumps. Two in parallel provide 535 IGPM @ 33' T.D.H. One oversized wet well 6,600 cu. ft. Four hours storage of design flow.

INLET WORKS

Twin grit channels each 22.5'xl.5' with a proportional weir control velocity of 1.0 ft/sec.
1 -12 inch flowminutor and a by-pass channel with manually cleaned bar screen. One parshall flume (16" throat) for flow measurement.

AERATION TANK

1 - 80'x28'x14' dp aeration tank. 18.7 hours detention @ DWF. 2 - 10hp platform mounted mechanical aerators.

FINAL CLARIFICATION TANK

1 - tank 61'x19'x10' dp SWD rated at 700 IGPD/ft^2 S.S.R. at peak flow (0.77 MIGD).

CHLORINATION

1 chlorine contact chamber 30 minutes detention at DWF.
1 gas chlorinator - 100 lb/day

SLUDGE HANDLING

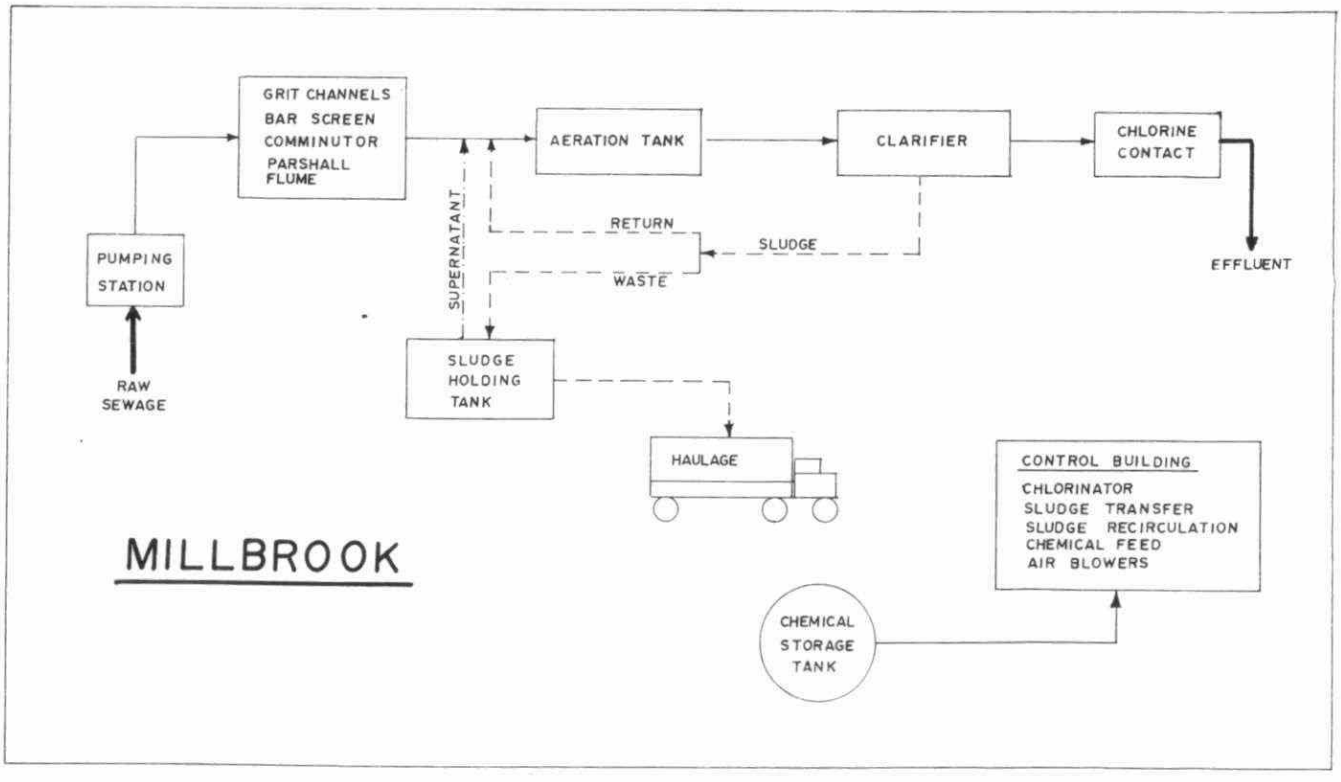
2 aerated sludge holding tanks each 9'xll'xl0' dp.
1 rotary positive desplacement type blower capable of supplying 40 CFM @ 6 PSIG.
2 horizontal non-clog, activated sludge pumps each 346 IGPM @ 47' T.D.H.
1 - 10hp variable speed motor and 1 - 10hp constant speed motor, 293-1170 RPM and 1150 RPM.

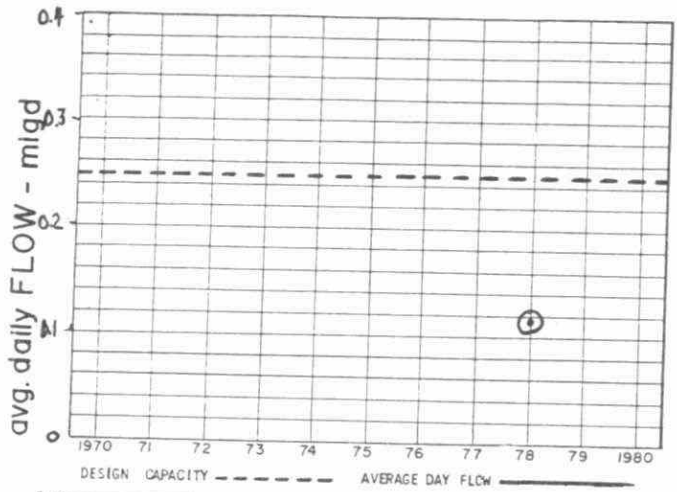
CHEMICAL FEED SYSTEM

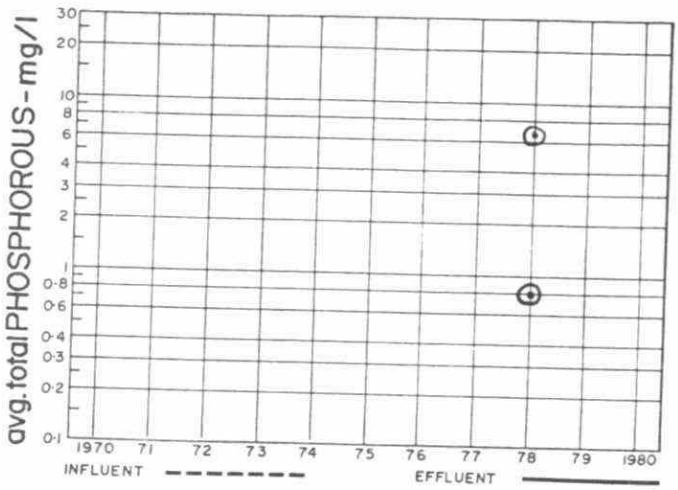
6000 IG. storage tank for alluminum or iron salts. Two (one standby) mechanical diaphragm metering duplex pumps each rated at 5 IGPH at 10' T.D.H. to feed to the aeration tank.

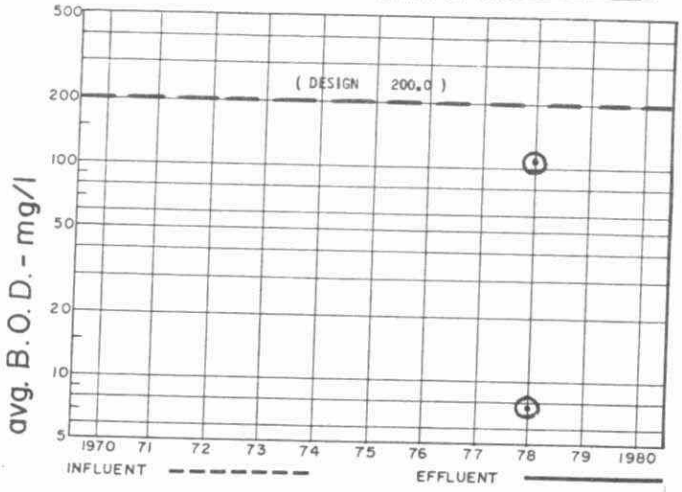
OUTFALL

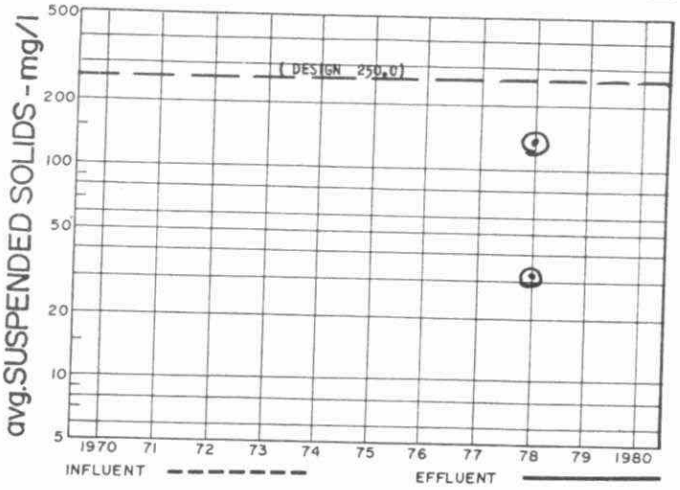
Discharging to Baxter Creek.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002238 — MILLBROOK WPCP

MUNICIPALITY : MILLBROOK
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

* DATA NOT AVAILABLE

CURRENT POPULATION : 1,103

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.250 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	*	*			230.0	26.0	88		208.0	108.0	48		8.1	3.2	60	
FEB	1.736	.062	.070		85.0	17.0	80	1.1	100.0	55.0	45	.7	3.6	1.4	61	
MAR	2.938	.095	.182		*	*			*	*			*	*		
APR	3.984	.133	.196		85.0	10.0	88	2.9	101.0	38.0	62	2.5	4.4	.9	79	.1
MAY	2.957	.095	.124	.068	78.0	7.0	91	2.0	88.0	24.0	72	1.8	4.6	.5	87	.1
JUN	2.330	.078	.233	.087	103.0	3.0	97	2.3	88.0	15.0	82	1.7	6.6	.2	96	.1
JUL	2.546	.082	.205	.063	88.0	4.0	95	2.1	105.0	22.5	78	2.1	4.8	.5	89	.1
AUG	3.711	.119	.283	.067	36.0	8.8	75	1.0	70.0	25.0	64	1.6	4.4	*		
SEP	3.962	.132	.239	.089	120.0	1.4	98	4.6	90.0	*			13.0	.2	98	.5
OCT	5.314	.172	.290	.120	95.0	2.5	97	4.9	130.0	13.0	90	6.2	6.3	.2	96	.3
NOV	4.023	.134	.342	.116	95.0	2.5	97	3.7	130.0	13.0	90	4.7	6.3	*		
DEC	2.886	.093	.118	.049	150.0	2.0	98	4.2	275.0	20.0	92	7.3	12.0	.5	95	.3
TOTAL	36.387							28.8				28.6				1.5
AVERAGE		.109	MAXIMUM .342	MAXIMUM .120	105.9	7.6	92		125.9	33.3	73		6.7	.8	87	
NO. OF SAMPLES					15	15			15	14			15	12		

MISSISSAUGA (CLARKSON)

PROJECT: Clarkson WPCP

PROJECT NO: 1-0053-66

TREATMENT: Extended Aeration

DESIGN FLOW: 12 mgd

BOD: Raw Sewage 222 mg/l

SS-Raw Sewage 250 mg/l

PRIMARY TREATMENT

SCREENING
Type: Mechanical

GRIT TANKS
Size: Two, (each) 21' x 97.4' x 13.9' awl
(177,400 I.G. each)
Retention: (each) 26 min.

SECONDARY TREATMENT

AERATION TANKS
Type: four-pass, rectangular
Size: two, each pass 20.25' x 312' x 15' awl
(4,731,000 I.G. total)
Retention: 11.4 hr

BLOWERS
Size : two (each) 39,000 cfm

SECONDARY SEDIMENTATION
Size: two, each 250' x 80' x 12' awl
(2,995,000 I.G. total)
Retention: 7.2 hr

SLUDGE PUMPS
Recirculating
Size: three, (each) 6,700 gpm

Wasting
Size: Four, (each) 600 gpm

CHLORINATORS
Type: Fisher and Porter
Size: Two, each 2,000 lb/day max.

SLUDGE HANDLING

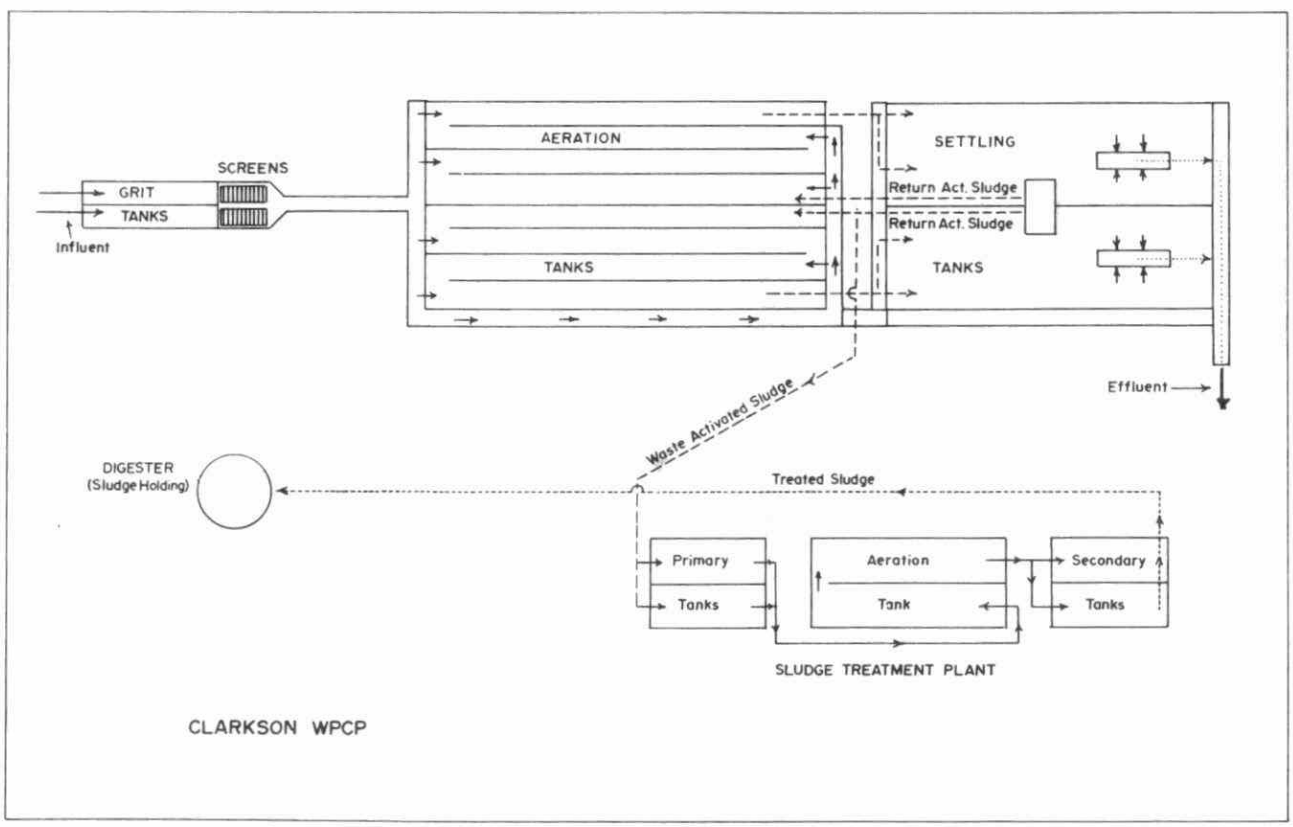
SLUDGE TREATMENT PLANT

PRIMARY SEDIMENTATION
Size: Two, each 60' x 14' x 10'
(105,000 I.G. total)

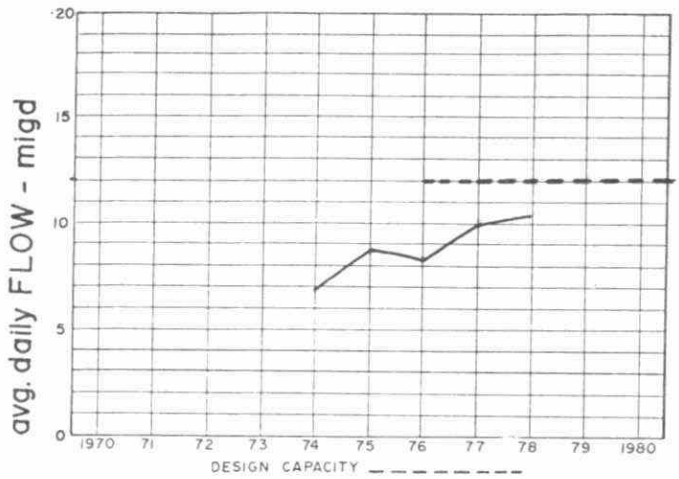
AERATION
Type: two-pass, diffused air
FLEXOFUSERS
Size: One, 120' x 18' x 11.25' each pass
(303,000 I.G.)
Air Supply: 3 blowers, 1400 cfm, 1700 cfm,
2150 cfm (7.5 psi)

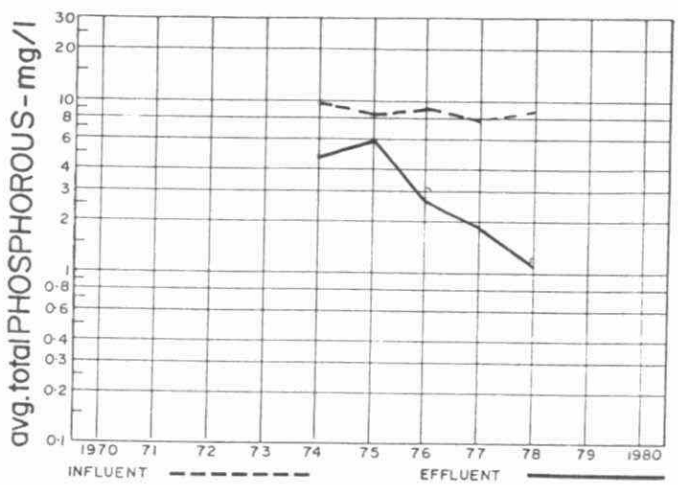
SECONDARY SEDIMENTATION
Size: two, 74' x 14' x 10.75'
(137,000 I.G. total)

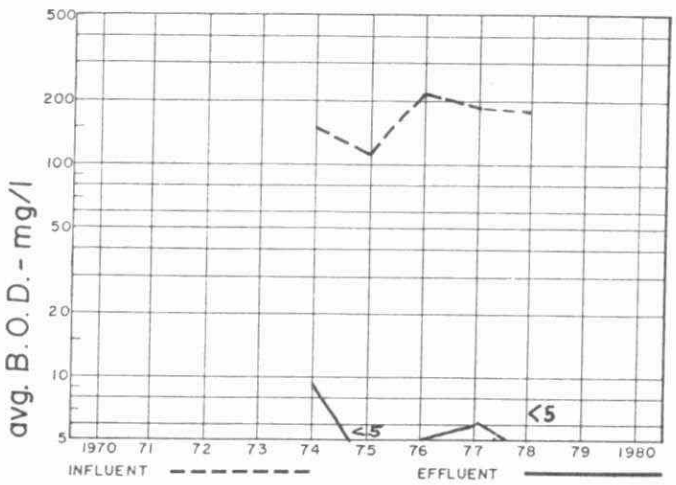
DIGESTER: (used as holding tank)
Type: concrete fixed-roof gas mixing
Size: One, 55' dia x 20' swd
(52,400 ft^3)

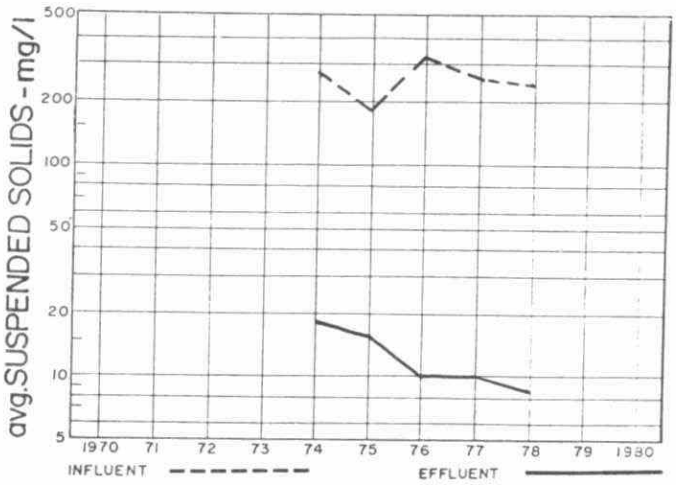


CLARKSON WPCP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001328 — MISSISSAUGA (CLARKSON)

MUNICIPALITY : MISSISSAUGA CLARKSON
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

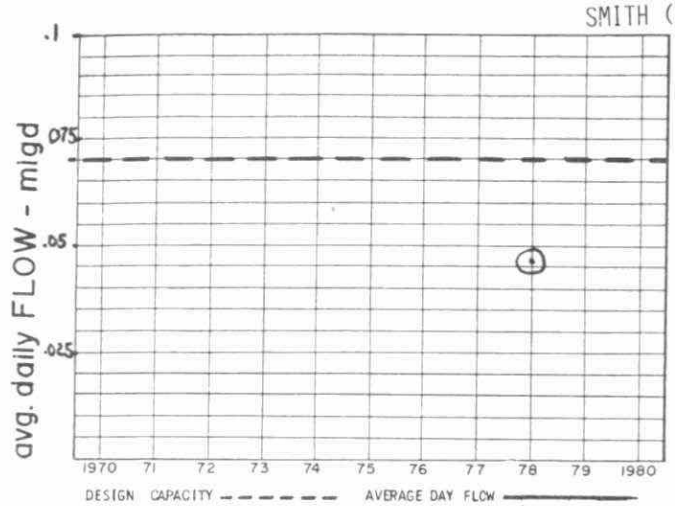
CURRENT POPULATION : 273,467

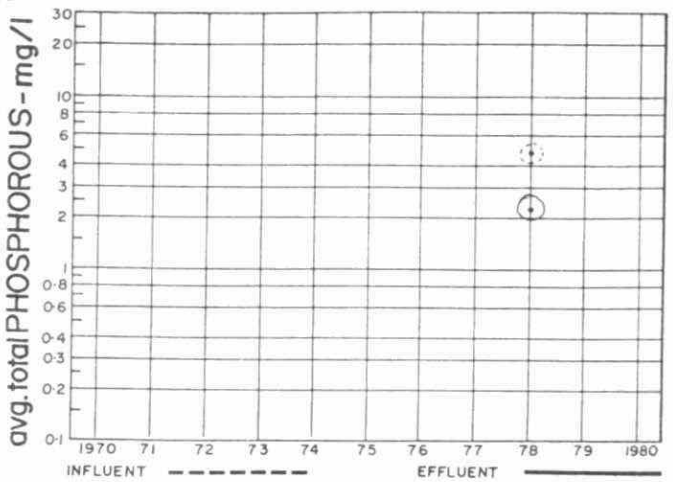
OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

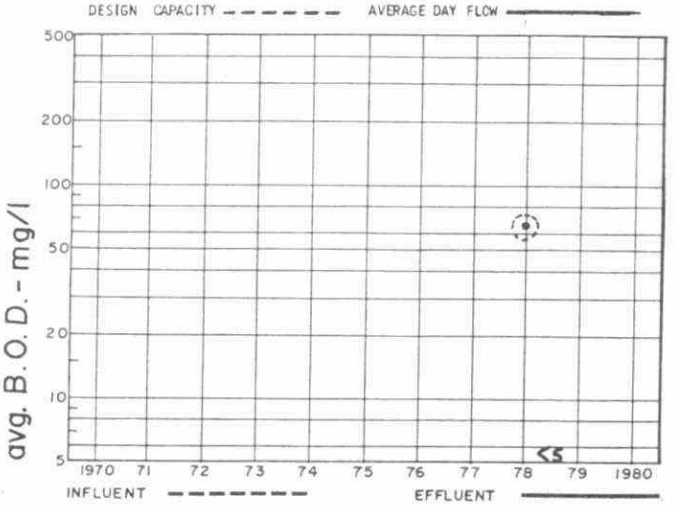
DESIGN CAPACITY : 12.000 MIGD — DESIGN BOD5 : 222.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

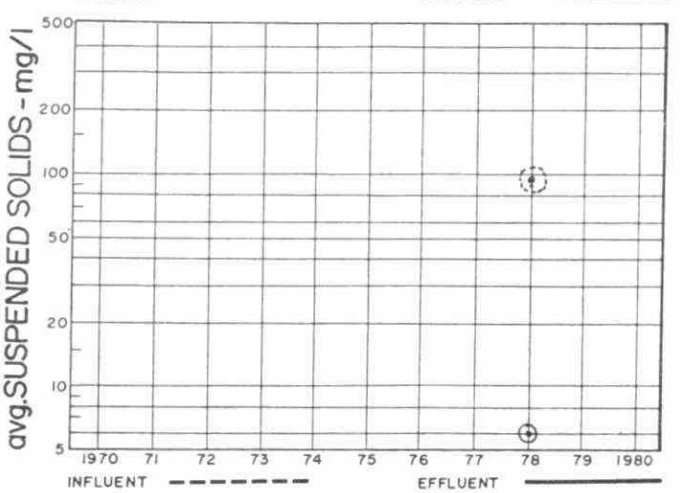
	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	312.600	10.100	11.900	15.000	234.0	12.0	94	693.9	340.0	6.0	98	1044.0	6.3	.9	85	16.8
FEB	267.800	9.600	10.300	13.500	167.0	4.0	97	436.5	188.0	7.0	96	484.7	6.0	.5	91	14.7
MAR	359.100	11.600	16.500	21.800	109.0	4.0	96	377.0	144.0	6.0	95	495.5	5.2	4.0	23	4.3
APR	266.880	8.896	14.644	17.200	180.0	3.6	98	470.7	282.0	7.0	97	733.9	11.0	.9	91	26.9
MAY	308.184	9.941	12.994	17.100	175.0	4.6	97	525.1	204.0	7.2	96	606.5	8.2	.4	95	24.0
JUN	290.870	9.696	10.389	14.200	169.0	3.0	98	482.8	268.0	8.7	96	754.2	10.8	.9	91	28.7
JUL	270.785	8.735	10.279	16.200	182.0	4.7	97	480.1	190.0	7.9	95	493.0	9.8	.7	92	24.6
AUG	286.348	9.237	10.637	16.700	147.0	4.0	97	409.4	226.0	11.0	95	615.6	8.3	.8	90	21.4
SEP	303.204	10.106	12.812	16.200	177.0	3.7	97	525.4	209.0	10.0	95	603.3	8.9	.7	92	24.8
OCT	313.455	10.111	11.994	16.200	216.0	3.1	98	667.3	314.0	10.0	96	952.9	7.1	2.2	69	15.3
NOV	380.402	12.680	13.904	16.800	314.0	4.5	98	1177.3	366.0	7.0	98	1365.6	12.2	1.5	87	40.7
DEC	400.597	12.922	15.726	20.800	160.0	6.0	96	616.9	196.0	18.0	90	713.0	8.0	1.4	82	26.4
TOTAL	3760.225							6862.4				8862.2				268.6
AVERAGE		10.302	MAXIMUM 16.500	MAXIMUM 21.800	185.8	4.7	97		243.9	8.8	96		8.4	1.2	85	
NO. OF SAMPLES					118	129			122	129			117	128		

SMITH (WOODLAND ACRES)









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : [redacted] WOODLAND ACRES WPCP

MUNICIPALITY : SMITH (WOODLAND ACRES)
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 4,200

* COMMENT: WORKS ACQUIRED LATE IN YEAR. DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.070 MIGD DESIGN BOD5 : MG/L DESIGN SUSP. SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR																
MAY																
JUN																
JUL																
AUG																
SEP																
OCT	.768	.051	.080		*	*			*	*			*	*		
NOV	1.339	.045	.062	.432	70.0	*			100.0	6.0	94	1.2	5.5	2.1	61	
DEC	1.333	.043	.052	.432	60.0	1.2	98	.7	90.0	6.0	93	1.1	4.1	2.7	34	
TOTAL	3.440							.7				2.3				
AVERAGE		.046	MAXIMUM .080	MAXIMUM .432	65.0	1.2	98		95.0	6.0	93		4.8	2.4	50	
NO. OF SAMPLES					2	1			2	2			2	2		

Ministry of the Environment
Ontario

Southeastern Region
④

REGIONAL OFFICE

KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES

Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

PEMBROKE
OTTAWA
CORNWALL
KINGSTON
BELLEVILLE
Lake Ontario

BANCROFT

Project: Bancroft WPCP

Project No: 1-0263-71

Treatment: Contact stabilization plant operated as extended aeration

Design Flow: Contact stabilization 0.4 M.I.G.D.
* Extended aeration 0.26 M.I.G.D.
BOD - Raw Sewage - 200 mg/l

Pumping Stations

P.S. No.1
Type: Two, SMART TURNER Submersible
Size: each 250 I.G.P.M.

P.S. No.2
Type: Two, submersible
Size: each 85 I.G.P.M.

P.S. No.3
Type: Two, submersible
Size: each 85 I.G.P.M.

P.S. No.4
Size: Two, each 500 I.G.P.M. @ 52.5' TDH

At-Plant P.S.
Type: Two, SPAANS screw pumps.
Size: each 1100 I.G.P.M. @ 19' TDH

Grit Channels
Type: Two, rectangular
Size: each 24' x 2' x 1.5' awl
(450 I.G.)
*Retention: each 2.5 min.

Comminutor
Type: one, CORD 16-inch

Biological Treatment

Aeration Cell No.1
(Future re-aeration)
Volume: 101,300 I.G.
*Retention: 9.4 hr

Aeration Cell No.2
(Future aerobic digester No.1)
Volume: 47,400 I.G.
*Retention: 4.4 hr

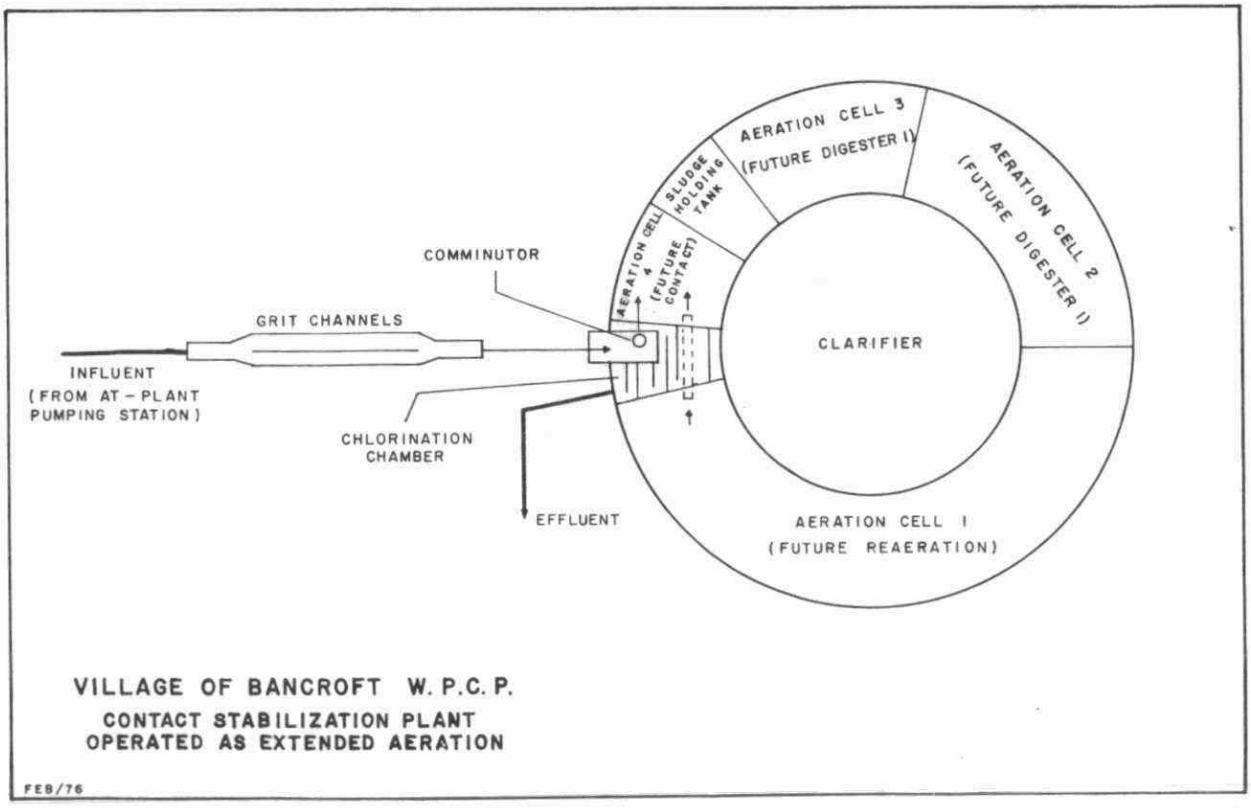
Aeration Cell No.3
(Future aerobic digester No.2)
Volume: 3C,300 I.G.
*Retention: 2.8 hr

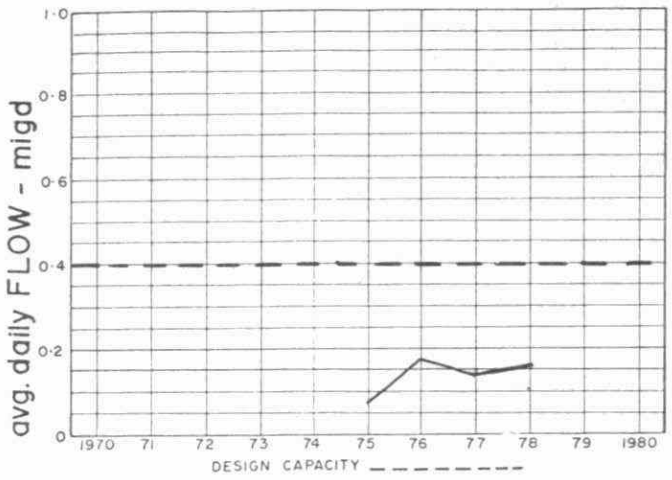
Aeration Cell No.4
(Future contact)
Volume: 16,400 I.G.
*Retention: 1.5 hr

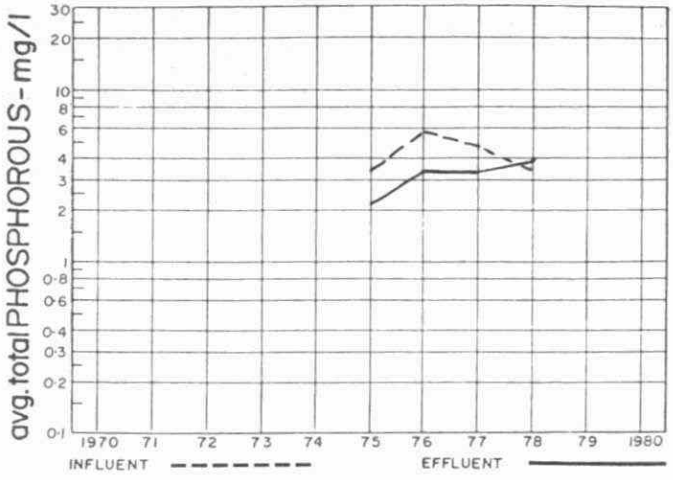
Chlorination Chamber
Volume: 11,000 I.G.
*Retention: 1.0 hr

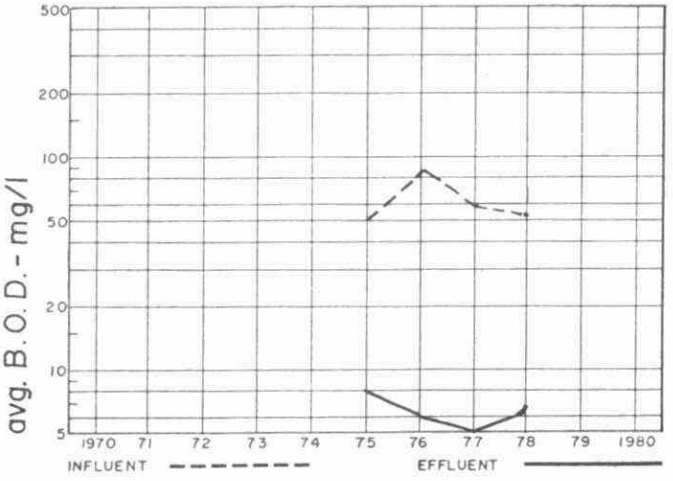
Chlorinator
Type: F and P 70C344
Size: 250 lb/day

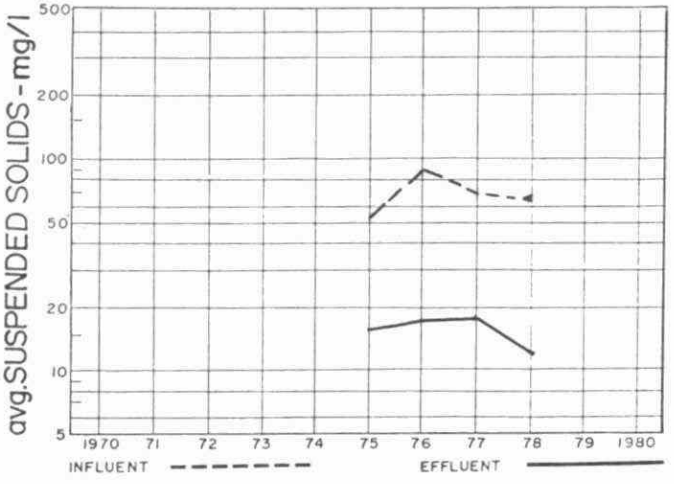
Clarifier:
Size: 50' dia. x 8.2' awd
Volume: 100,500 I.G.
*Retention: 9.3 hr
Loading:
* Surface: 132 I.G./ft^2/day
* Weir: 1655 I.G./ft/day











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001239 — BANCROFT WPCP

MUNICIPALITY : BANCROFT
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 2,346

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.400 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.867	.133	.168	.375	53.0	8.0	84	1.7	63.0	17.0	73	1.7	2.8			
FEB	3.515	.126	.137	.280	62.0	10.0	83	1.8	118.0	25.0	78	3.2	3.9	3.9		
MAR	3.886	.125	.156	.320	43.0	8.0	81	1.3	60.0	16.0	73	1.7	3.7	3.7		
APR	6.741	.225	.358	.520	53.0	8.0	84	3.0	115.0	13.0	88	6.8	2.8	1.3	53	.1
MAY	6.224	.201	.313	.500	39.0	9.0	76	1.8	31.0	11.0	64	1.2	3.0	4.0	-	-
JUN	4.387	.146	.174	.430	45.0	14.5	67	1.3	36.0	31.1	13	.2		6.1		
JUL	4.236	.136	.146	.440	82.0	9.5	88	3.0	120.0	10.3	91	4.6	4.9	4.6	6	
AUG	4.032	.130	.158	.420	45.0	2.6	94	1.7	68.0	10.8	84	2.3	4.2	3.8	9	
SEP	3.756	.125	.140	.380	46.0	2.0	95	1.6	41.0	4.1	90	1.3	4.5	3.2	28	
OCT	4.984	.161	.190	.340	39.0	2.0	94	1.8	33.0	5.3	83	1.3	2.5	6.0	-	-
NOV	5.304	.176	.187	.330	45.0	3.9	91	2.1	54.0	5.5	89	2.5	3.4	2.8	17	
DEC	6.069	.196	.213	.385	55.0	2.4	95	3.1	68.0	6.4	90	3.7	4.6	3.0	34	
TOTAL	57.001							24.2				30.5				.1
AVERAGE		.157	MAXIMUM .358	MAXIMUM .520	50.5	6.6	86		67.2	12.9	80		3.6	3.8	-	
NO. OF SAMPLES					28	24			54	58			56	84		

BARRY'S BAY

PROJECT Village of Barry's Bay

PROJECT NO. 1-0126-67

TREATMENT Extended aeration with phosphorous removal

DESIGN POPULATION 2318

DESIGN FLOW 0.273 mgd

BOD - 220 mg/l

PUMPING STATIONS

No.1 3 pumps 400 gpm @ 30'hd. and 5 hp.
No.2 2 pumps 210 gpm @ 46'hd. and 9.4 hp.
No.3 2 pumps 90 gpm @ 41'hd. and 5 hp.

PRETREATMENT

Grit Removal
Twin Channel Bar Screen
Comminutor - 3/4 hp. motor

SECONDARY TREATMENT

Aeration Tank

Volume: 0.22 mgall.
Loading: 13 lb. BOD/day/1000 $ft.^3$

Secondary Sedimentation

Loading, surface: 1000 Igall/day/$ft.^2$
Surface Area: 1092 $ft.^2$

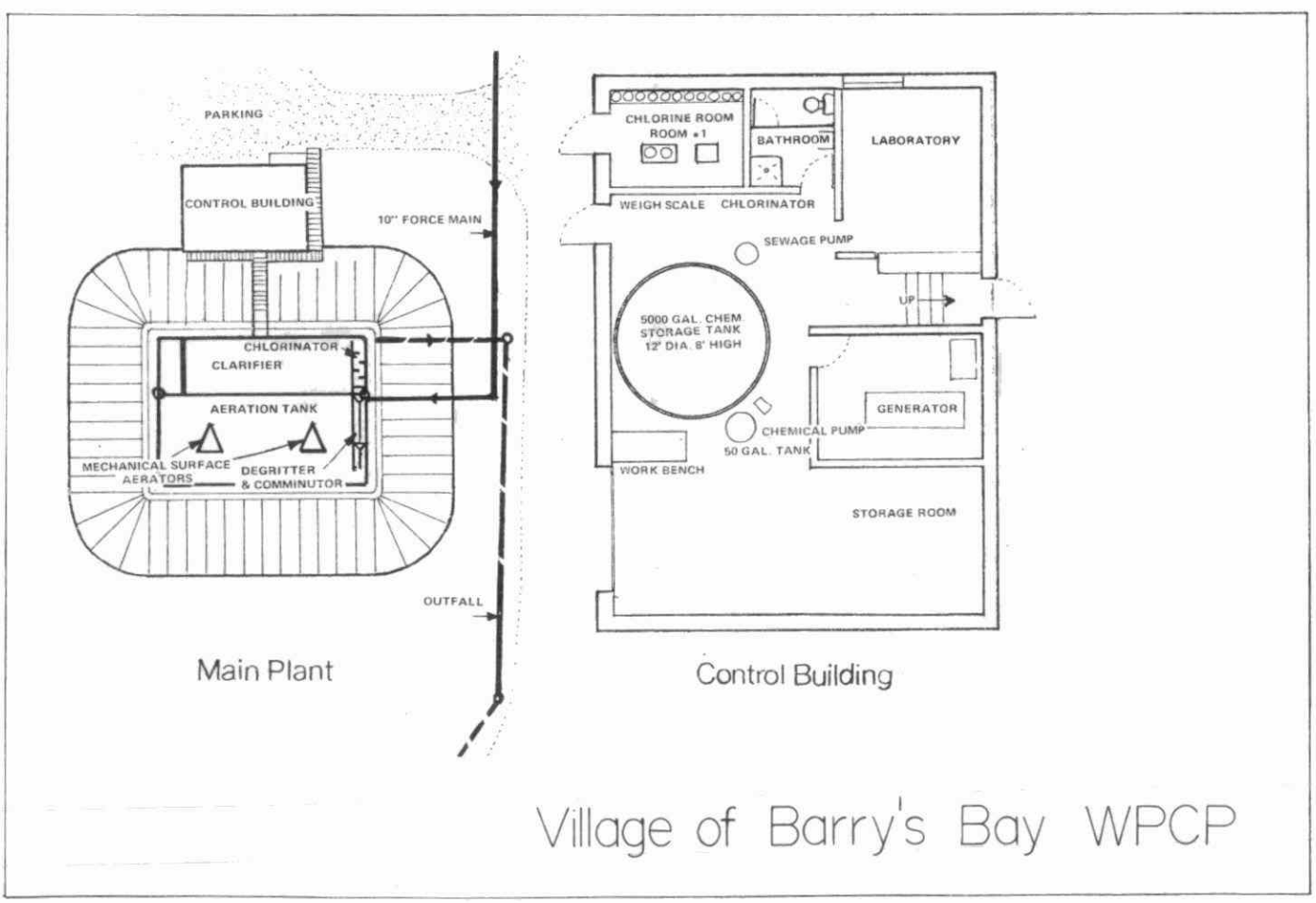
SLUDGE HANDLING

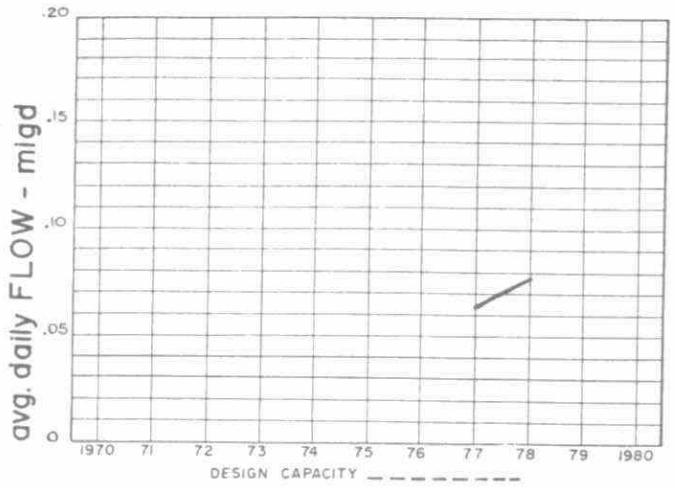
Holding Tank Volume: 2724 $ft.^3$
Air Supply: 700 cfm

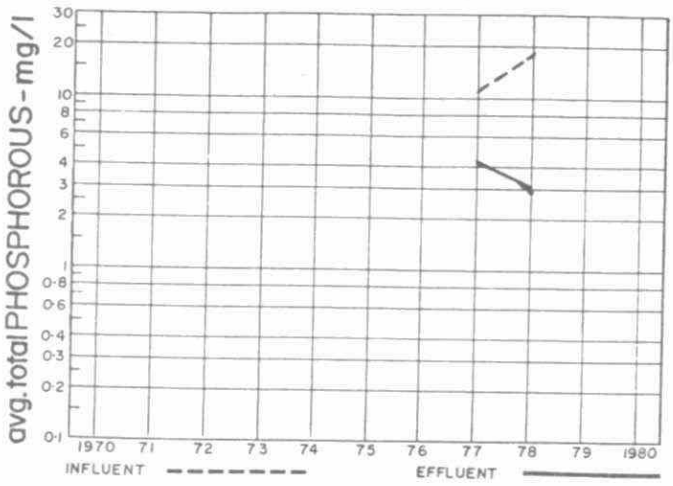
CHLORINATION

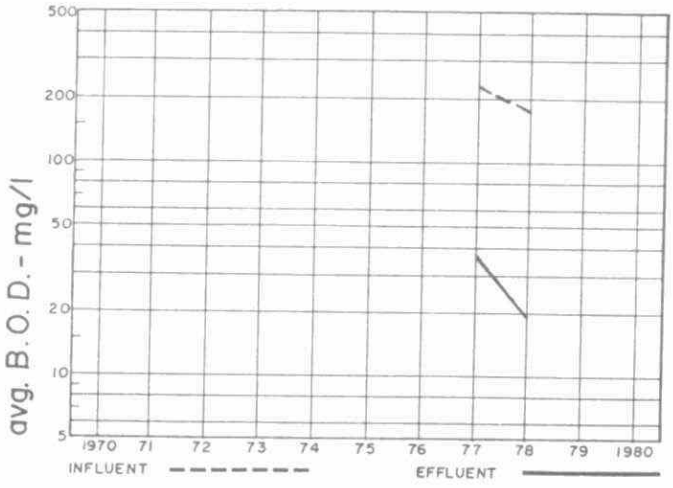
Chlorine Contact Chamber

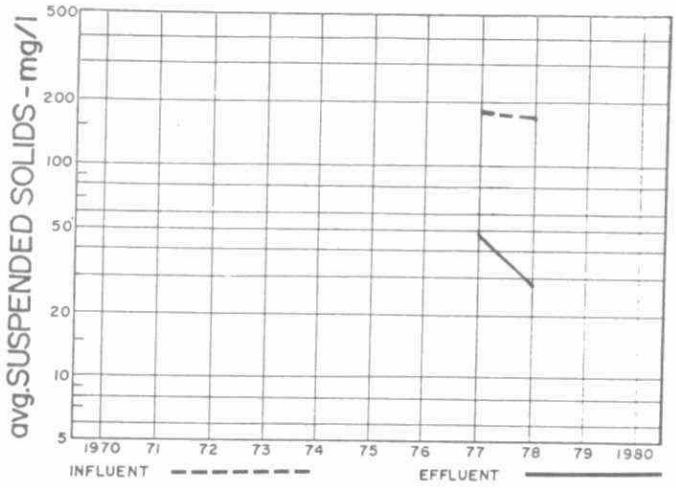
Volume: 5685 gal.
Retention: 30 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001854 — BARRY'S BAY WPCP

MUNICIPALITY : BARRY'S BAY
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,310

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.273 MIGD — DESIGN BOD5 : 220.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.458	.047	.060	.150	165.0	57.5	65	1.5	165.0	105.5	36	.8	11.0	6.3	42	
FEB	1.430	.051	.071	.220	92.0	21.5	76	1.0	100.0	35.0	65	.9		4.9		
MAR	1.717	.055	.068	.210	220.0	24.0	89	3.3	368.0	65.0	82	5.2	19.0	4.4	76	.2
APR	1.991	.066	.094	.270	113.0	30.0	73	1.6	117.0	68.5	41	.9	47.8	14.3	70	.6
MAY	2.335	.076	.089	.200	313.0	15.0	95	6.9	132.0	12.3	90	2.7	19.6	1.2	93	.4
JUN	2.280	.076	.084	.288	112.0	12.5	88	2.2	75.0	6.7	91	1.5	28.9	.7	97	.6
JUL	2.859	.092	.103	.230	123.0	9.5	92	3.2	196.0	4.7	97	5.4	8.2	.5	93	.2
AUG	2.802	.090	.108	.230	128.0	19.5	84	3.0	104.0	10.6	89	2.6	15.0	.7	95	.4
SEP	2.933	.098	.107	.288	225.0	8.0	96	6.3	119.0	11.0	90	3.1	19.1	.9	95	.5
OCT	2.837	.091	.112	.200	268.0	4.1	98	7.4	293.0	8.8	96	8.0	15.3	.4	97	.4
NOV	2.812	.094	.103	.160	148.0	2.9	98	4.0	176.0	8.4	95	4.7	13.0	.6	95	.3
DEC	3.200	.103	.106	.150	180.0	22.5	87	5.0	149.0	10.3	93	4.4	15.1	.8	94	.4
TOTAL	28.654							45.4				40.2				4.0
AVERAGE		.078	MAXIMUM .112	MAXIMUM .288	173.9	18.9	89		166.1	28.9	82		19.2	2.9	84	
NO. OF SAMPLES					25	25			87	87			94	105		

CHALK RIVER

PROJECT: Village of Chalk River WPCP

PROJECT NO: 1-0149-68

TREATMENT: Contact Stabilization
operated as Extended Aeration

DESIGN FLOW: .08 mgd Extended Aeration
0.12 mgd Contact Stabilization

BOD - Removal - 90%

SS - Removal - 90%

MAIN AND RAILWAY STS. P.S
Pumps: Two, each 240 gpm

GRIT CHANNELS
Size: Two, each 2.5' x 20' x .75' awd
(230 I.G. each)
Retention: (each) o.4 min

BIOLOGICAL TREATMENT

AERATION TANK "A"
(Future Aerobic Digester)
Capacity: 21,700 I.G.
Retention: 0.65 hr

AERATION TANK "B"
(Future Re-aeration tank)
Capacity: 42,300 I.G.
Retention: 1.27 hr.

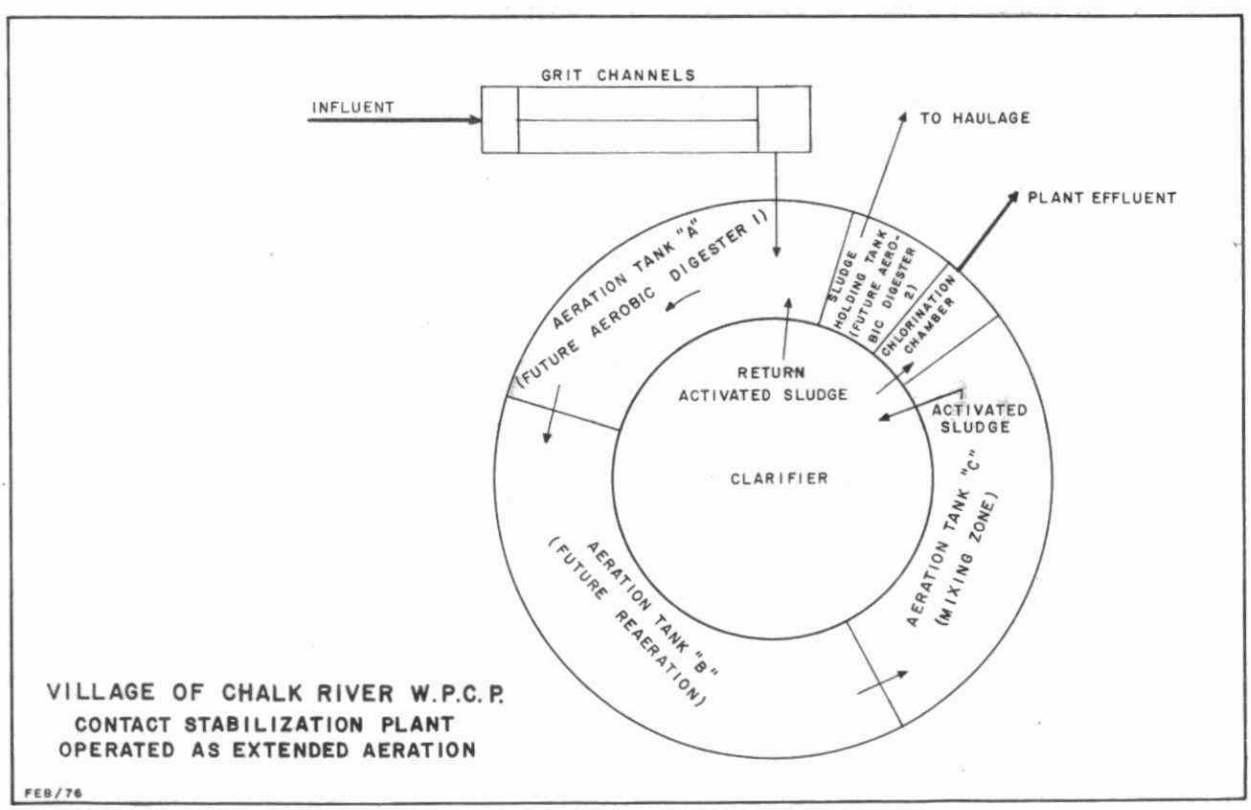
AERATION TANK "C"
(Future Mixing Tank)
Capacity: 16,500 I.G.
Retention: 0.49 hr

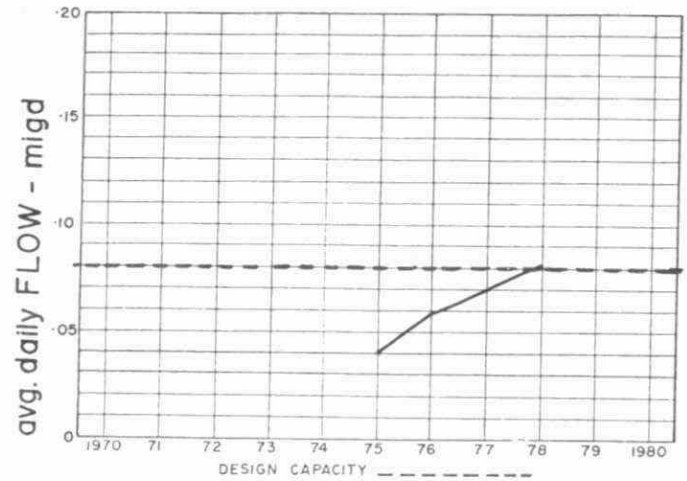
BLOWERS
Type: Two, Roots, RAI 812
Size: 25 HP

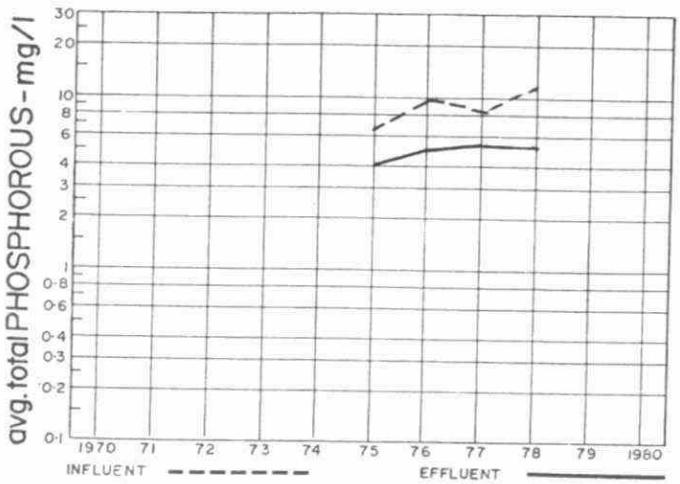
SETTLING TANK
Size: 48' o.d. x 10.2 awd
Capacity: 52,900 I.G.
Retention: 1.6 hr
Loading:
- Surface 47 I.G/ft2/day
- Weir 548 IG/ft/day

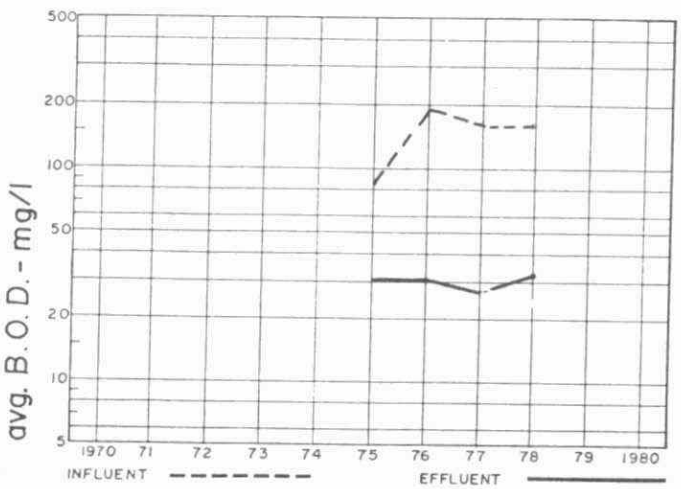
SLUDGE HOLDING TANK
(Future Aerobic Digester 2)
Capacity: 6200 I.G.

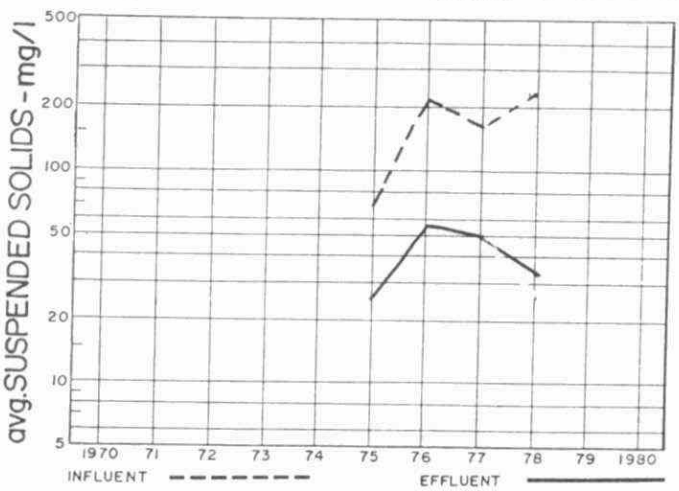
PLANT P.S.
Pumps: Two, each 300 gpm











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001587 — CHALK RIVER WPCP

MUNICIPALITY : CHALK RIVER
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
CONVERT TO OTHER OPERATING MODE

CURRENT POPULATION : 1,022

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.080 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP. SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.235	.075	.079		157.0	24.0	84	2.9	710.0	38.0	94	15.0	*	6.4		
FEB	2.064	.074	.077		130.0	13.0	90	2.4	120.0	18.0	85	2.1	13.0	*		
MAR	2.143	.069	.081		320.0	30.0	90	6.2	490.0	42.5	91	9.5	*	*		
APR	3.174	.102	.135		80.0	18.0	77	1.9	110.0	19.0	82	2.8	8.2	*		
MAY	2.825	.091	.120		125.0	18.0	85	3.0	190.0	13.0	93	5.0	11.0	3.0	72	.2
JUN	2.479	.083	.100	.300	200.0	15.0	92	4.5	250.0	25.0	90	5.5	11.0	*		
JUL	2.529	.082	.100		125.0	29.0	76	2.4	111.0	25.0	77	2.1	11.0	7.1	35	
AUG	2.299	.074	.087		217.0	4.4	97	4.8	248.0	23.0	90	5.1	9.2	4.3	53	.1
SEP	2.391	.080	.093	.300	130.0	70.0	46	1.4	128.0	14.0	89	2.7	11.0	3.8	65	.1
OCT	2.500	.080	.090		145.0	29.0	80	2.9	268.0	30.0	88	5.9	14.0	4.1	70	.2
NOV	2.443	.081	.100		150.0	26.5	82	3.0	169.0	35.0	79	3.2	11.5	6.2	46	.1
DEC	2.419	.080	.092		118.0	118.0			113.0	133.0	-	-	7.3	7.3		
TOTAL	29.501							35.4				58.9				.7
AVERAGE		.081	MAXIMUM .135	MAXIMUM .300	158.0	32.9	79		242.2	34.6	85		10.7	5.2	50	
NO. OF SAMPLES					20	19			39	26			15	34		

DESERONTO

Project: Town of Deseronto WPCP
Project No : 1-0010-66
Design Flow: 0.3 MGD
BOD : Raw Sewage 197 mg/l
Removal 90%
SS : Raw Sewage 224 mg/l
Population : 2800

PUMPING STATION (at Plant)
2, Raw sewage pumps
Size: 416 IGPM at 23' TDH

GRIT REMOVAL:
Type: 2 manually cleaned channels
Size: 1'6" x 20' x 2' swd
Volume: 786 I. Gal. Detention: 3.8 min.

COMMINUTION:
One, type: QU250 Design: 695 IGPM

SCREENING:
Bar screen with $\frac{1}{4}$" bars on 2" centres.

BIOLOGICAL TREATMENT
(Napanee Industries Plant)
(Contact Stabilization Plant converted to Extended Aeration)

AERATION SECTION:
Volume: 37, 400 I. Gal

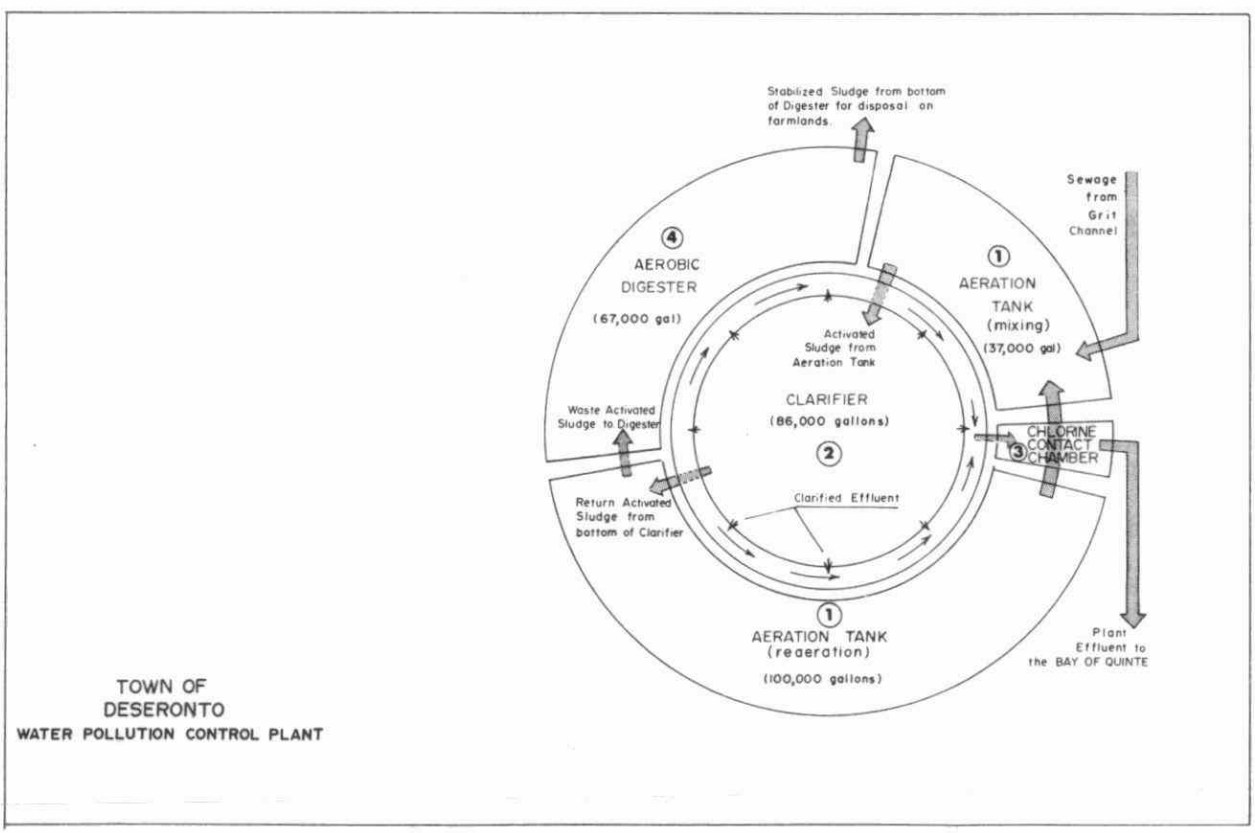
REARATION SECTION:
Volume: 99, 800 I. Gal.
Detention (as extended aeration plt) 11 hours

AEROBIC DIGESTER:
Volume: 67, 400 I. Gal.
Airlift - Return sludge : 350 IGPM
- Waste sludge: 210 IGPM
Blowers: 3, SUTORBILT
Size: 430 SCFM at 8 psi

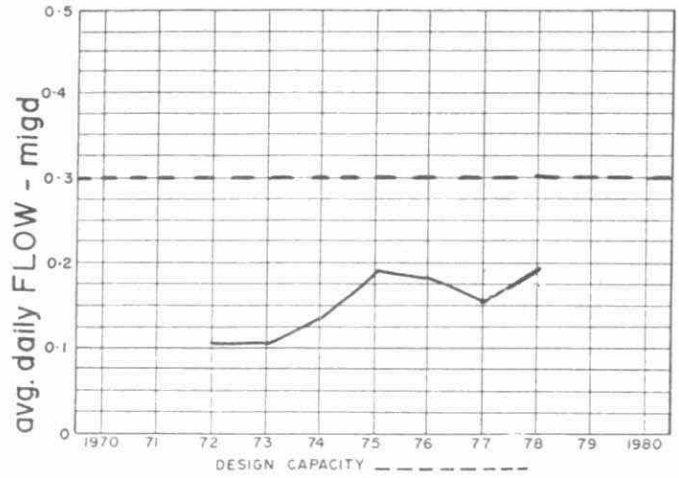
SEDIMENTATION SECTION:
Volume: 86, 350 I. Gal. Detention: 6.9 hours
Surface overflow rate: 330 gal/ft ^{2}/day

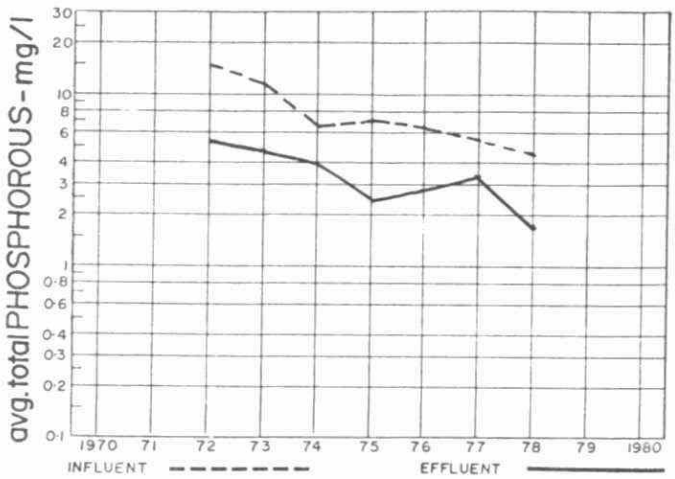
CHLORINE CONTACT CHAMBER:
Volume 6200 I. Gal Detention: 30 min.

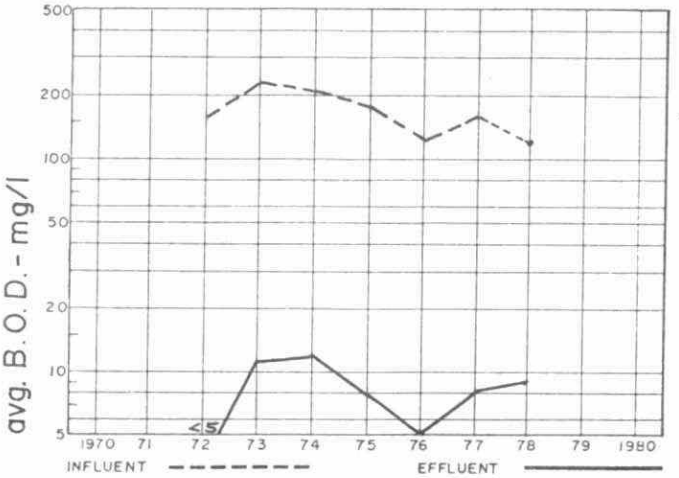
OUTFALL
500' 18" dia. pipe

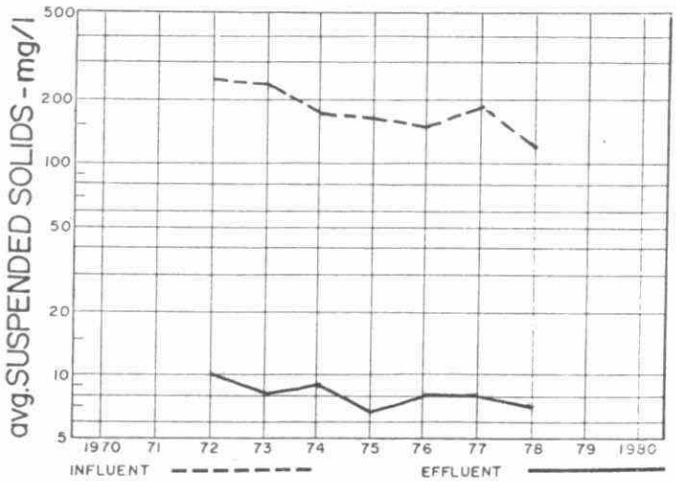


TOWN OF
DESERONTO
WATER POLLUTION CONTROL PLANT









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 11000980 — **DESERONTO W P C P**

MUNICIPALITY : DESERONTO
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

* DATA NOT AVAILABLE

CURRENT POPULATION : 1,751

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD — **DESIGN BOD5** : 197.0 MG/L — **DESIGN SUSP.SOLIDS** : 224.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.081	.228	.330	.350	97.0	13.8	85	5.8	130.0	15.5	88	8.1	4.0	1.8	55	.1
FEB	4.378	.156	.191	.350	118.0	22.0	81	4.2	138.0	16.0	88	5.3	4.6	*		
MAR	7.351*	.250	.356	.350	99.0	12.9	86	6.3	120.0	15.5	87	7.6	4.5	2.2	51	.1
APR	7.834	.261	.350	.150	151.0	9.5	93	11.0	95.0	8.0	91	6.8	2.6	*		
MAY	6.295	.203	.236	.350	123.0	7.0	94	7.3	100.0	5.0	95	5.9	*	*		
JUN	4.868	.162	.284	.350	151.0	10.5	93	6.8	125.0	4.5	96	5.8	6.3	1.6	74	.2
JUL	7.661	.252	.350	.350	128.0	4.0	96	9.5	163.0	4.0	97	12.1	5.2	1.8	65	.2
AUG	4.012	.130	.350	.350	88.0	4.0	95	3.3	90.0	4.0	95	3.4	5.6	*		
SEP	4.342	.144	.350	.350	141.0	6.0	95	5.8	110.0	4.0	96	4.6	5.7	*		
OCT	5.178	.167	.350	.350	96.0	.5	99	4.9	187.0	.6	99	9.6	5.3	*		
NOV	5.428	.180	.350	.350	*	*			*	*			*	*		
DEC	4.942	.170	.350	.350	*	*			*	*			*	*		
TOTAL	69.370							64.9				69.2				.6
AVERAGE		.192	MAXIMUM .356	MAXIMUM .350	119.2	9.0	92		125.8	7.7	93		4.8	1.8	61	
NO. OF SAMPLES					21	20			22	21			21	12		

EGANVILLE

PROJECT Village of Eganville WPCP
PROJECT NO. 1-0007-66

TREATMENT Extended Aeration

DESIGN FLOW 0.168 migd

BOD - Raw Sewage
- Domestic 182 mg/l
- Creamery 154 mg/l

Removal 80%

PRIMARY TREATMENT

Grit Removal

Type: Parallel channels, manually cleaned
Size: Two 17'4" x 1'2"

SCREENING

Type: Manually cleaned
Size: 1¼" openings

COMMINUTION

Type: Aer-o-Flow Type A-12

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air
Size: 83,400 gal
Retention: 12 hours

Air Supply

Type: Dresser type RAI
Size: Three-340 scfm @ 7 psi

SECONDARY SEDIMENTATION

Size: 25'8" dia x 15' (37,500 gal)
Retention: 5.3 hours
Loading: Surface 388 gal/ft^2/day
Weir: 1170 gal/ft/day

CHLORINATION

Type: Wallace & Tiernan Type 831
Size: 20 lbs/day

Chlorine Contact Chamber

Size: 3900 gal
Retention: 30 minutes

OUTFALL

OUTFALL

- to Bonnechere River

SLUDGE HANDLING

Digestion System

Type: Aerobic
Size: 56,000 gal

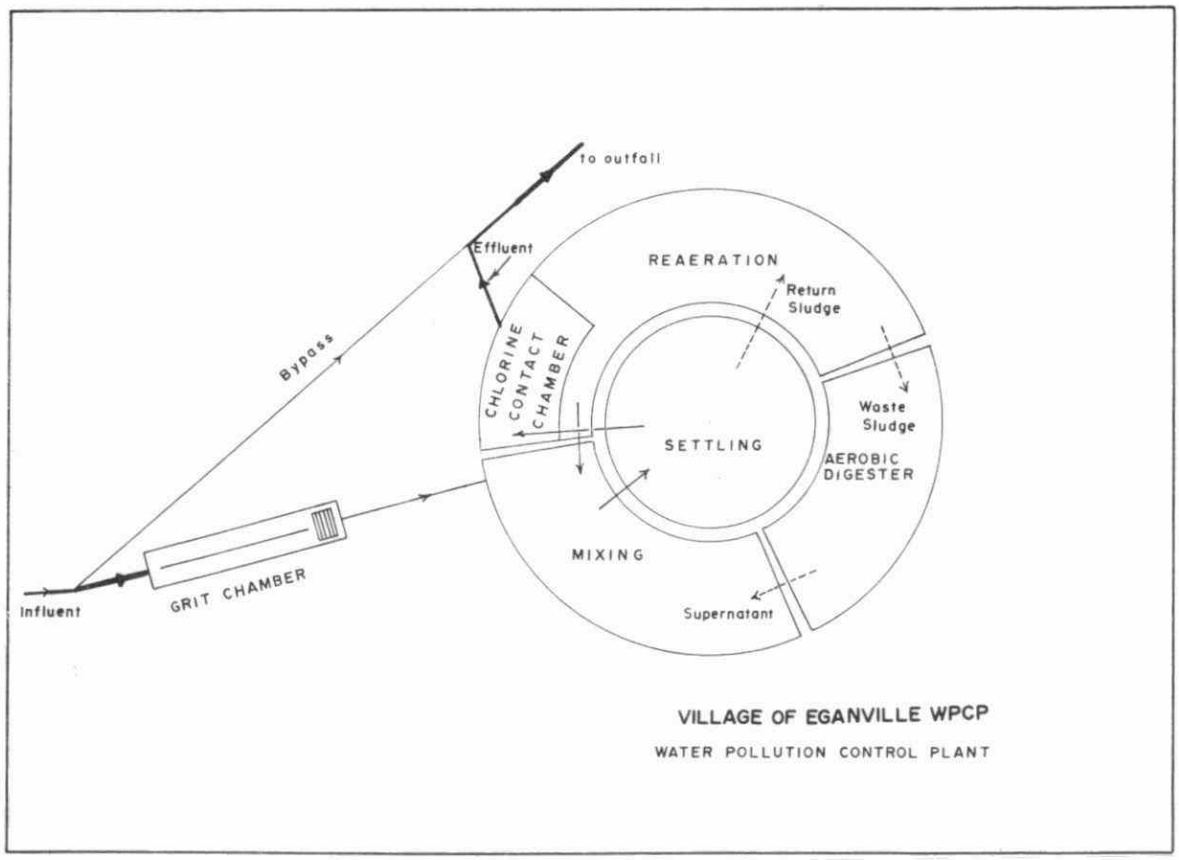
PUMPING STATIONS

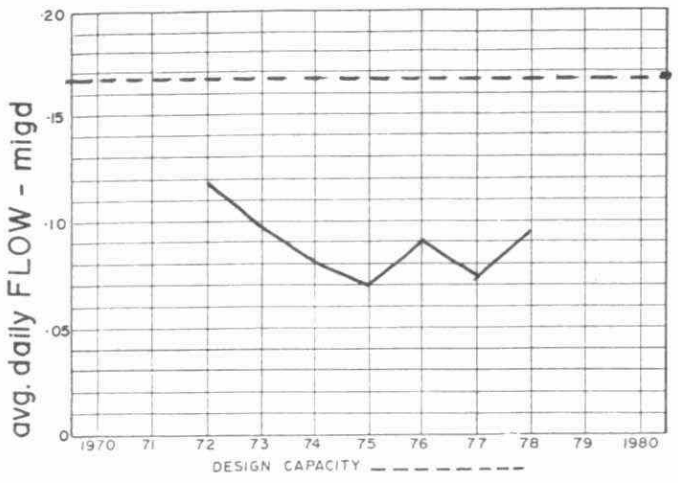
North Side

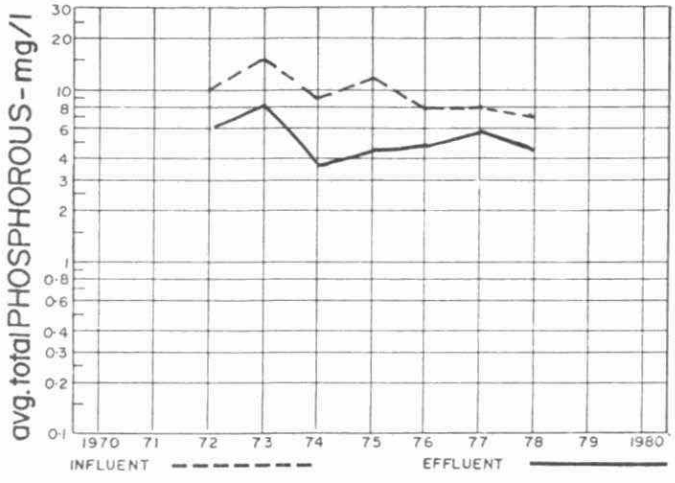
Two Flygt Model CP-3100, 350 US gpm @ 35' TDH

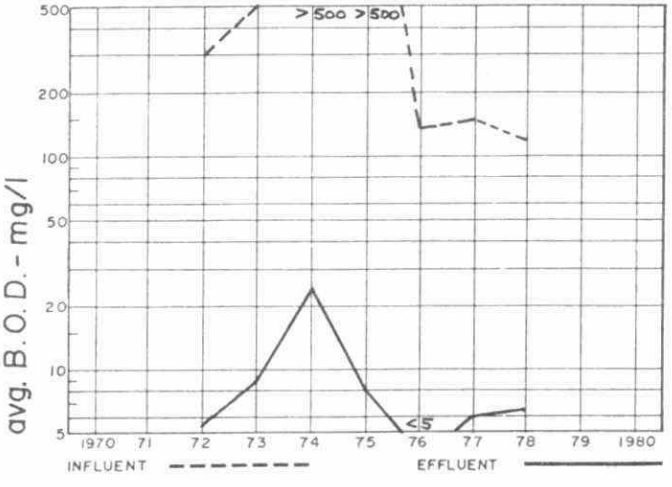
Water Street

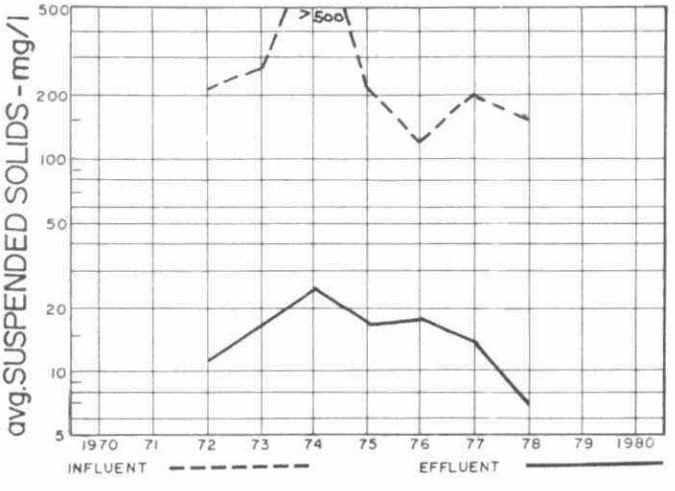
Two Flygt Model CP-3100, 150 US gpm @ 25' TDH











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000141 — EGANVILLE WPCP

MUNICIPALITY : EGANVILLE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 1,307

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.168 MIGD — DESIGN BOD5 : 182.0 MG/L — DESIGN SUSP.SOLIDS : 154.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.054	.066	.077	.250	58.0	8.0	86	1.0	87.0	6.0	93	1.6	7.0	*		
FEB	1.967	.070	.077	.190	51.0	9.5	81	.8	100.0	7.0	93	1.8	6.7	3.8	43	
MAR	2.226	.072	.096	.205	115.0	8.0	93	2.3	193.0	8.0	95	4.1	7.8	4.4	43	
APR	4.264	.142	.190	.320	65.0	11.5	82	2.2	70.0	6.0	91	2.7	3.5	2.5	28	
MAY	4.092	.132	.144	.280	95.0	10.5	88	3.4	120.0	7.0	94	4.6	5.1	2.9	43	
JUN	3.750	.125			83.0	9.0	89	2.7	193.0	15.0	92	6.6	6.4	4.9	23	
JUL	5.064	.163			145.0	6.0	95	7.0	141.0	5.5	96	6.8	5.2	4.9	5	
AUG	2.790	.090	.052	.220	160.0	5.0	96	4.3	260.0	6.0	97	7.0	9.8	4.8	51	.1
SEP	2.259	.075	.456	.242	218.0	1.0	99	4.9	193.0	7.0	96	4.2	9.5	5.0	47	.1
OCT	2.067	.067	.077	.220	220.0	1.5	99	4.5	205.0	10.5	94	4.0	10.2	7.2	29	
NOV	1.926	.064	.073		98.0	2.9	97	1.8	120.0	5.0	95	2.2	8.2	*		
DEC	2.031	.065	.070	.297	218.0	1.9	99	4.3	190.0	9.0	95	3.6	10.0	4.9	51	.1
TOTAL	34.490							39.2				49.2				.3
AVERAGE		.094	MAXIMUM .456	MAXIMUM .320	127.1	6.2	95		156.0	7.6	95		7.4	4.5	39	
NO. OF SAMPLES					24	24			24	23			24	19		

ERNESTOWN (ODESSA)

PROJECT Ernestown Twp. (Odessa) W.P.C.P.

PROJECT NO. 1-0177-68

TREATMENT Extended Aeration

DESIGN FLOW 0.2 MIGD

PUMPING STATION

Three Midland ABS Model AFP-G010 4" submersible pumps each rated at 300 IGPM @ 39' TDH with 210 mm. impeller, at 400 IGPM @ 43' TDH with 220 mm. impeller.

PRIMARY TREATMENT

Grit Removal

Two, Grit Channels 1.5' wide x 20' long with proportional weirs.

Comminution

One, BIF Waste Disintegrator

SECONDARY TREATMENT

Aeration Tank

One 70' x 30' x 15' SWD
31500 Cu. Ft. (0.196 MIG)
Loading - 13 lb. BOD/1000 Cu. Ft.
Two, 7.5 Hp lighting aerators.

Clarifier

One, 60' x 19' with upflow of 658 IGPD/ft^2 @ peak flow of 0.75 MIGD

CHEMICAL TREATMENT

Chlorination

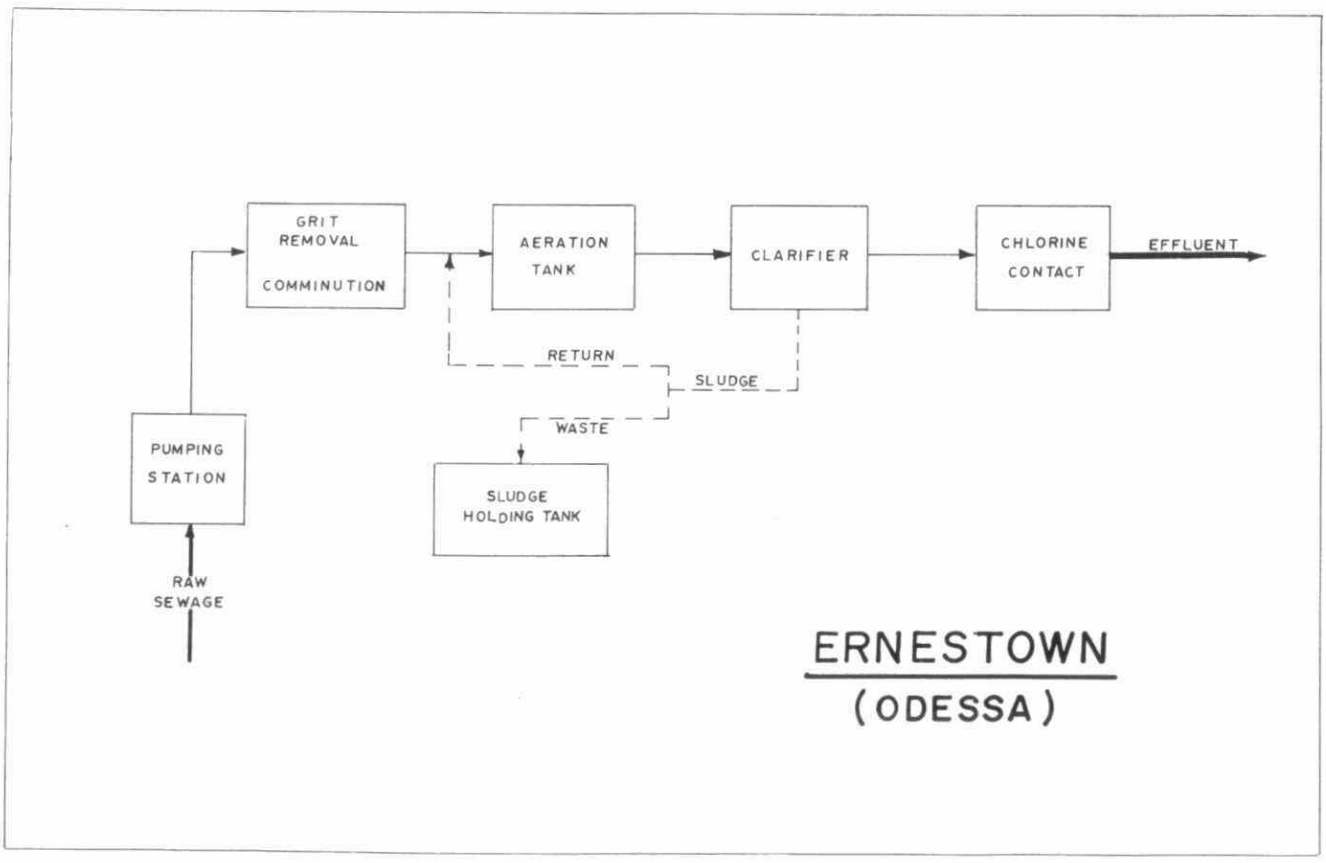
Chlorine contact tank - 30 min. detention time at avg. flow, with chlorinator pump.

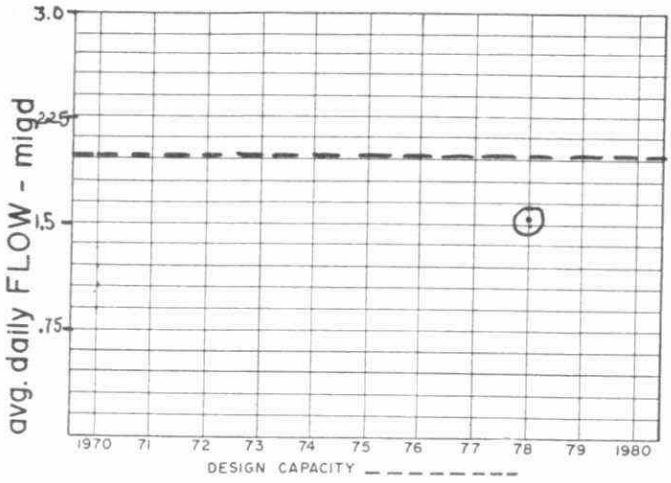
Phosphorus Removal

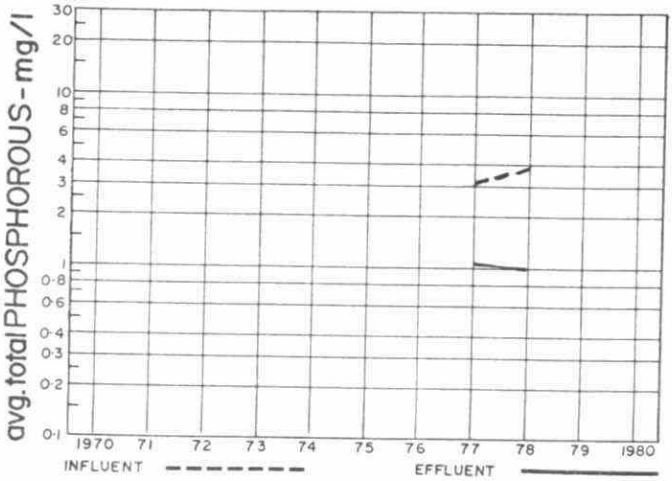
SLUDGE HANDLING

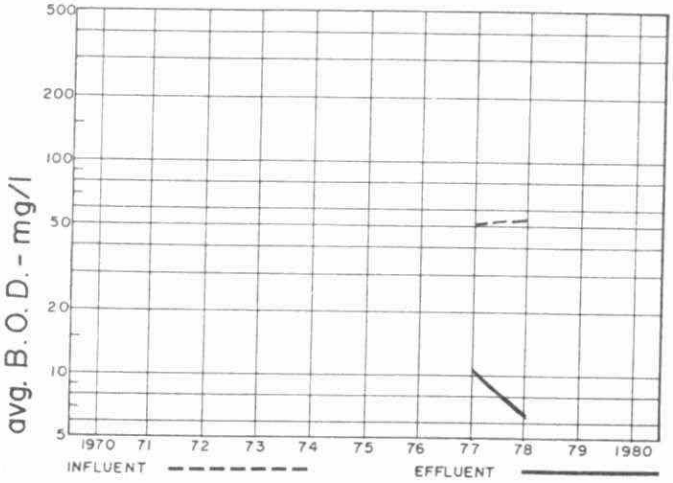
Sludge Holding Tank

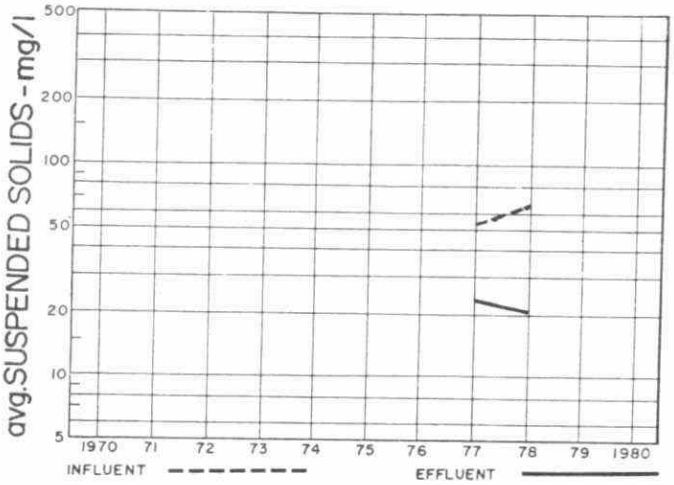
1000 Cu. Ft. providing 0.5 Cu. Ft. per person served.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002041 ODESSA W P C P

MUNICIPALITY : ERNESTOWN ODESSA
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 11,211

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	*	*			*	*			*	*			*	*		
FEB	4.452	.159	.169		30.0	5.3	82	1.1	55.0	23.5	57	1.4	6.8	1.1	83	.2
MAR	*	*			48.0	5.0	89		37.0	15.0	59		3.1	1.2	61	
APR	*	*			58.0	9.1	84		48.0	13.5	71		3.2	.7	78	
MAY	5.262	.169	.220		44.0	8.0	81	1.8	30.0	15.0	50	.7	2.1	.9	57	
JUN	5.288	.176	.298	.500	60.0	6.8	88	2.8	85.0	14.0	83	3.7	3.8	.7	81	.1
JUL	4.137	.133	.211	.500	43.0	11.5	73	1.3	100.0	16.0	84	3.4	2.4	.8	66	
AUG	3.685	.119	.128	.475	74.4	4.4	94	2.5	56.0	21.2	62	1.2	3.9	1.1	71	.1
SEP	4.040	.134		.500	111.0	.2	99	4.4	75.0	41.0	45	1.3	5.1	2.3	54	.1
OCT	4.348	.140			36.0	12.4	65	1.0	73.0	25.0	65	2.0	7.0	1.1	84	.2
NOV	6.224	.207	.404	.500	63.0	2.0	96	3.7	75.0	19.0	74	3.4	3.9	1.0	74	.1
DEC	5.566	.180	.323	.500	25.0	5.8	76	1.0	68.0	32.5	52	1.9	2.3	.9	60	
TOTAL	43.002							19.6				19.0				.8
AVERAGE		.157	MAXIMUM .404	MAXIMUM .500	53.8	6.4	88		63.8	21.4	66		3.9	1.0	72	
NO. OF SAMPLES					40	45			40	45			40	44		

HAWKESBURY

PROJECT : Hawkesbury
PROJECT NO. : 1-0131-67
TREATMENT : Activated Sludge
DESIGN FLOW : 2.7 MIGD

RAW SEWAGE PUMPING STATION
Three 3333 IGPM pumps (@ 32' TDH) Each driven by a 50 HP 1200 RPM motor.

GRIT REMOVAL
One detritor 16'x16'x2.75' deep

AERATION TANKS
Three tanks 82'x24'x15' deep each. 3.75 hrs. detention with 30% return sludge.

BLOWERS
Two 3000 SCFM blowers each driven by a 150 HP 3600 RPM motor for aeration tanks.
Two 3000 SCFM blowers each driven by a 125 HP 3600 RPM motor for aerobic digesters.

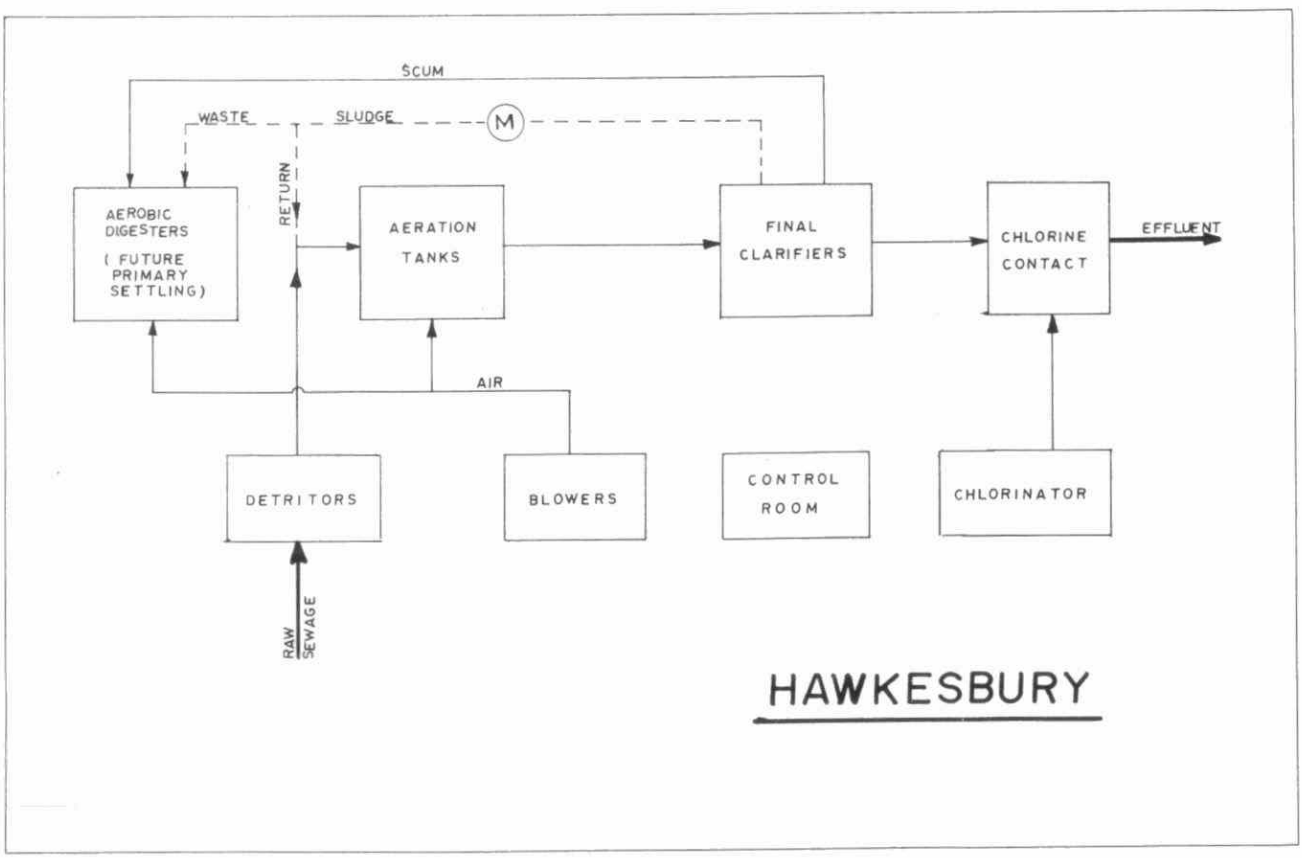
CLARIFIERS
Three tanks 135'x24'x10' deep.
Loading: 833 gal/sq.ft/day
Sludge collection by chain flight longitudinal and cross collectors.

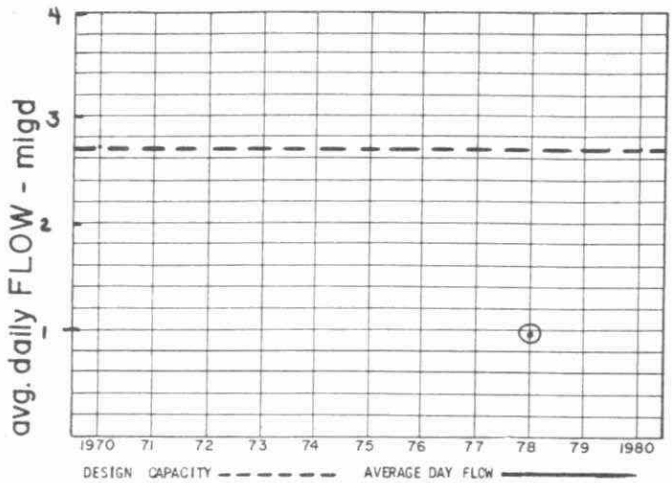
CHLORINATION
One chlorine contact chamber
40 minutes detention @ DWF
One 500 lb. capacity gas chlorinator for chlorination of raw sewage, return activated sludge and effluent.

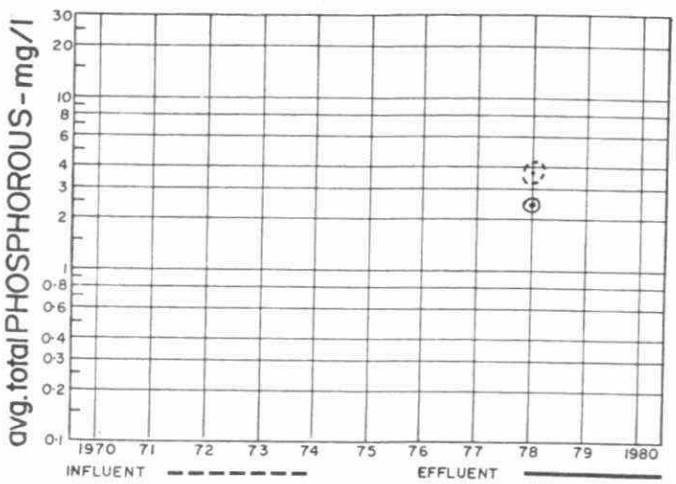
PHOSPHOROUS REMOVAL
One 5000 gallon chemical storage tank with two positive displacement diaphragm chemical feed pumps each rated @ 23 IGPM.

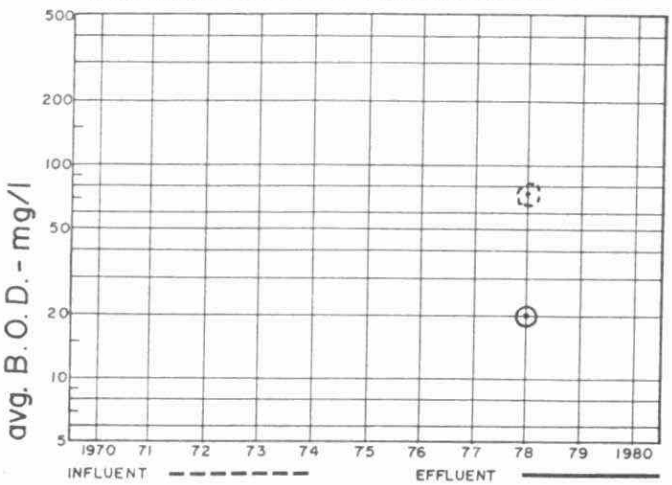
DIGESTION
Three aerobic digesters each 112'x24'x12' deep. (96,500 cu. ft.)

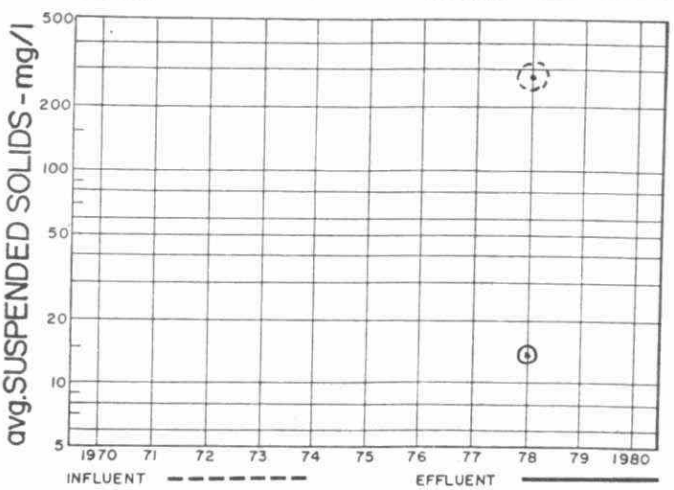
OUTFALL
A 24" diam. sewer to Ottawa River.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002283 HAWKESBURY WPCP

MUNICIPALITY : HAWKESBURY
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 5,911

* COMMENT: FACILITIES PUT INTO OPERATION LATE IN THE YEAR.

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 2.700 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR																
MAY																
JUN																
JUL																
AUG																
SEP																
OCT																
NOV																
DEC	33.226	1.187	2.703		75.0	20.0	73	18.2	280.0	14.0	95	88.3	3.8	2.5	34	.4
TOTAL	33.226							18.2				88.3				.4
AVERAGE		1.187	MAXIMUM 2.703	MAXIMUM	75.0	20.0	73		280.0	14.0	95		3.8	2.5	34	
NO. OF SAMPLES					1	1			1	1			1	1		

L'ORIGNAL

PROJECT: L'Orignal WPCP

PROJECT NO. 1-0025-66

TREATMENT: Extended Aeration

DESIGN FLOW: .190 MIGD

BOD - Raw Sewage - 200 mg/l
- Effluent - 15 mg/l

SS - Raw Sewage - 250 mg/l
- Effluent - 15 mg/l

PUMPING STATION
Pumps: Two, each 475 gpm @72'TDH

GRIT CHANNELS
Size: each 1.5'x16'x1'awd
Volume(each): 150 I.G.
Retention(each): 1.1 min

COMMINUTOR
Size: One 10-inch

AERATION TANK
Volume: 125,500 I.G.
Retention: 15.9 hr

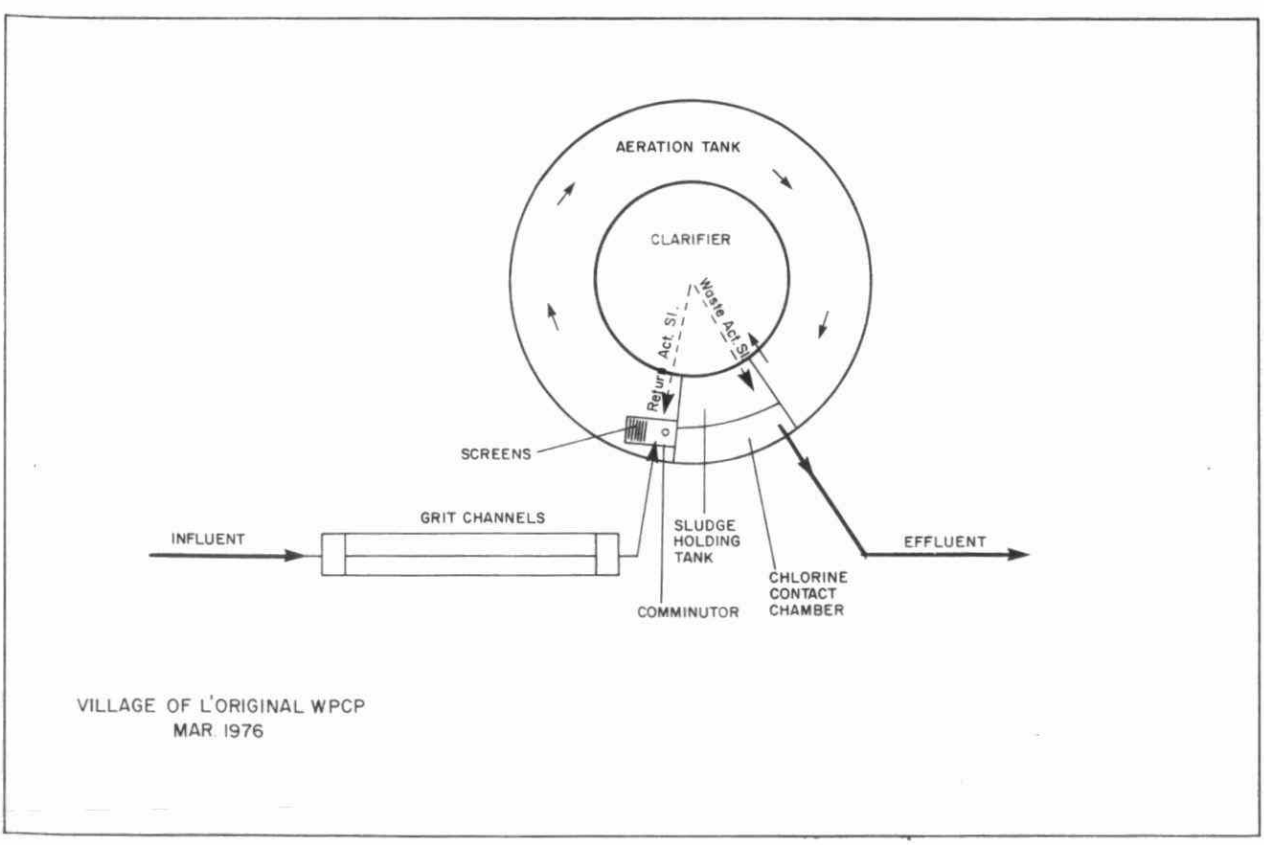
BLOWERS
Type: Three Roots 76 RA1
Size: Each 1080 cfm @ 7 psi

CLARIFIER
Size: 30' i.d.
Volume: 66,400 I.G.
Loading: Surface 269 IG/ft^2/day
Weir 2021 IG/ft /day
Retention: 8.4 hr

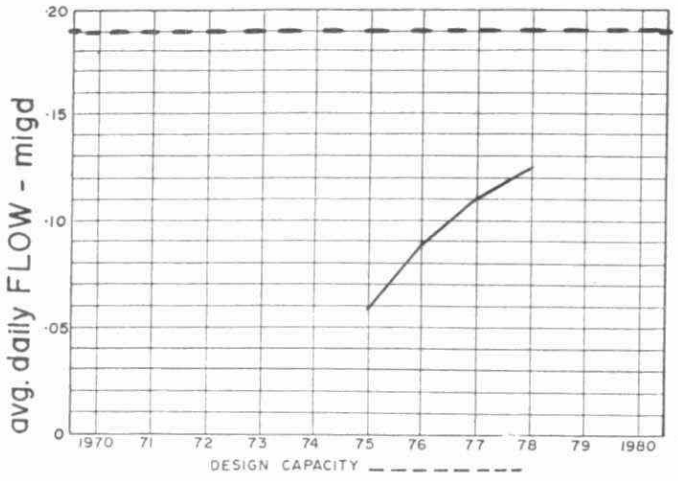
SLUDGE HOLDING TANK
Volume: 6550 I.G.

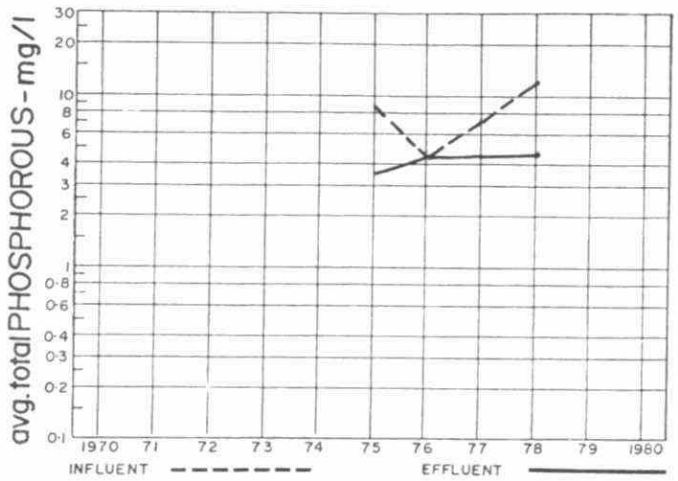
CHLORINATION TANK
Volume: 4370 I.G.
Retention: 33 min

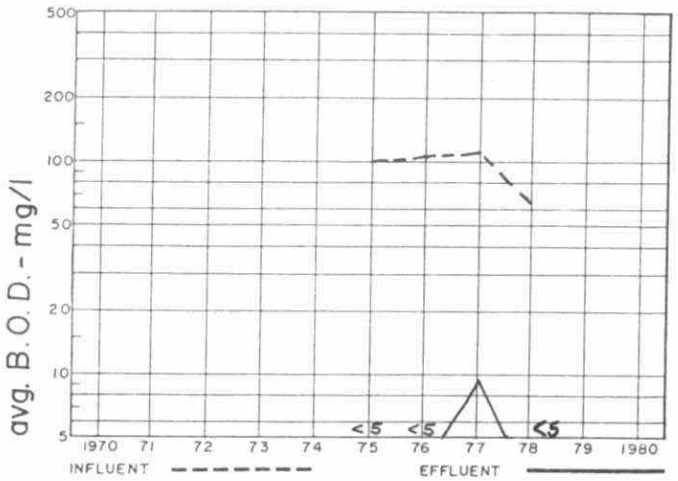
CHLORINATOR
Type: One, W and T V800
Size: 50 lb/day

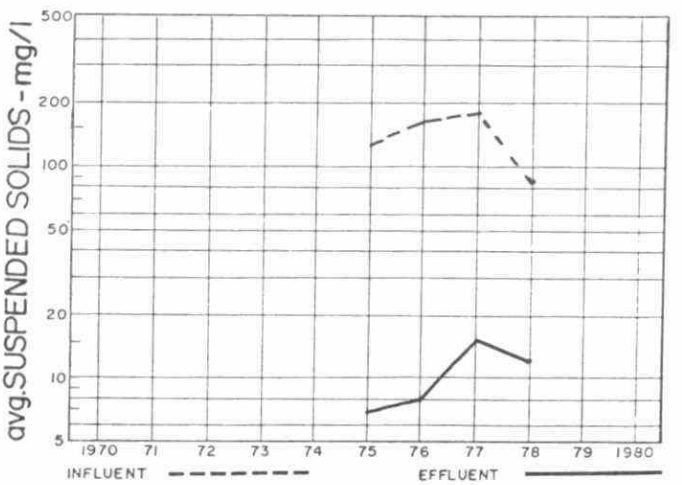


VILLAGE OF L'ORIGINAL WPCP
MAR. 1976









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001701 L'ORIGNAL WPCP

MUNICIPALITY : L'ORIGNAL
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 1,453

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.190 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.254	.105			190.0	*			220.0	*			.1	*		
FEB	*	*			*	*			*	*			*	*		
MAR	3.568	.115	.260		31.0	.6	98	1.0	57.0	15.0	73	1.4	2.3	6.7	-	-
APR	6.398	.206	.574		24.0	.8	96	1.4	45.0	.8	98	2.8	2.3	1.3	43	
MAY	3.500	.113	.252		17.0	8.0	52	.3	76.0	10.0	86	2.3	2.5	3.2	-	-
JUN	3.525	.122	.296		70.0	4.0	94	2.3	75.0	12.0	84	2.2	6.8	5.6	17	
JUL	3.111	.100	.295		80.0	6.0	92	2.3	50.0	25.0	50	.7	5.8	6.4	-	-
AUG	3.835	.124	.283		85.0	6.0	92	3.0	130.0	8.0	93	4.6	9.5	6.0	36	.1
SEP	2.368	.085	.203		85.0	2.0	97	1.9	35.0	9.0	74	.6	14.0	5.2	62	.2
OCT	4.619	.149	.549		15.0	12.0	20	.1	25.0	18.0	28	.3	34.0	3.4	90	1.4
NOV	3.514	.117	.249		65.0	7.0	89	2.0	80.0	18.0	77	2.1	4.0	*		
DEC	4.141	.149	.373		64.0	2.5	96	2.5	165.0	10.0	93	6.4	50.0	3.6	92	1.9
TOTAL	41.833							16.8				23.4				3.6
AVERAGE		.126	MAXIMUM .574	MAXIMUM	66.0	4.8	92		87.0	12.5	85		11.9	4.6	61	
NO. OF SAMPLES					16	10			16	10			13	9		

MARMORA

PROJECT: Village of Marmora WPCP

PROJECT NO: 1-0050-66

TREATMENT: Extended Aeration

DESIGN FLOW: 0.191 mgd
(0.334 mgd operated as step-aeration)

BOD - 200 mg/l

SS - 200 mg/l

PUMPING STATION
Type: Three, Midland AFP-0010
Size: each 450 usgpm @41' TDH

GRIT CHANNELS
(at circumference of plant)
Size: Two, each 20'x 1.5' x 0.5' awd
Volume: (each) 94 IG
Retention: (each) 0.7 min

COMMINUTOR

Type: Jones and Atwood 10 R

AERATION TANK 1
Volume: 89,600 I.G.
Retention: 11.2 hr

AERATION TANK 2
Volume: 111,250 I.G.
Retention: 14.0 hr

BLOWERS
Type: Two, Sutorbilt 711-4500

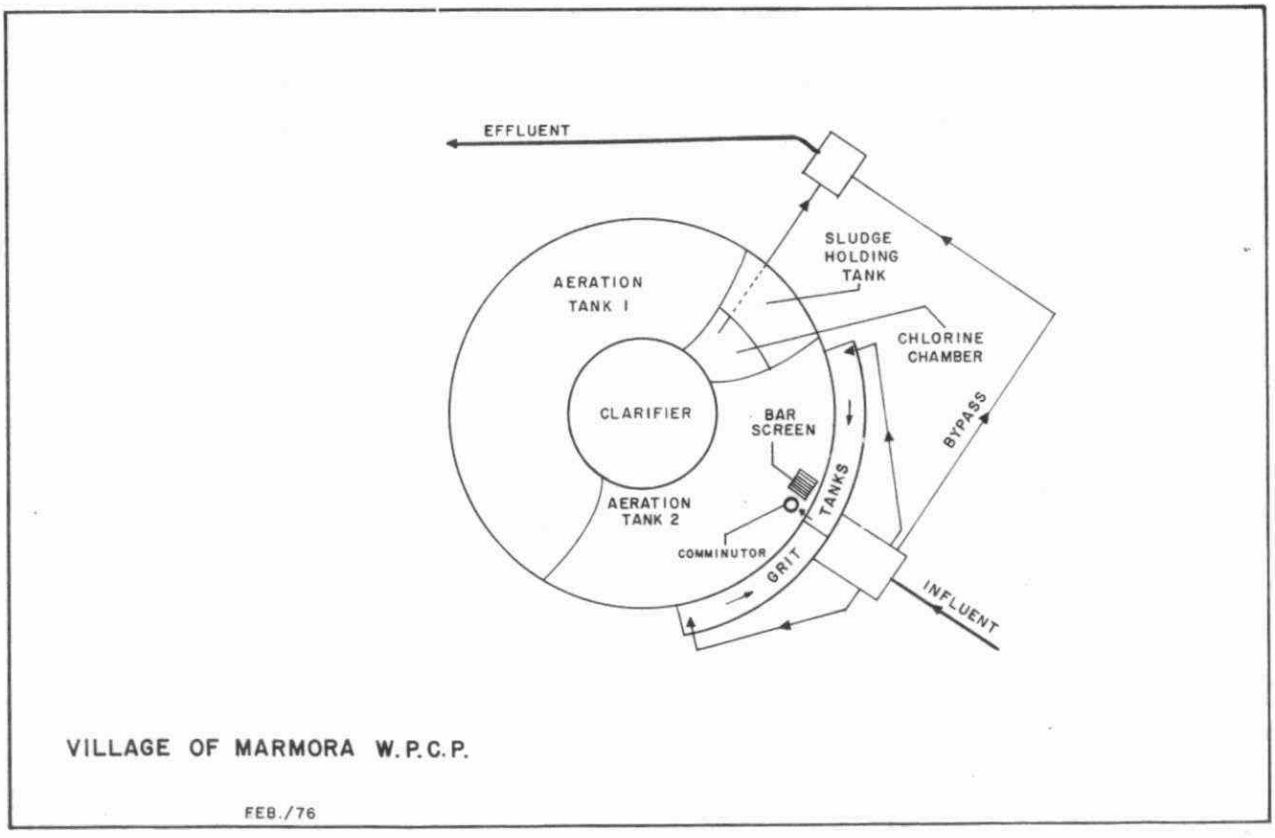
CLARIFIER
Size: 26.8' i.d. x 11.5' awd
Volume: 35188 I.G.
Retention: 4.4 hr
Loading:
- Surface
- Weir

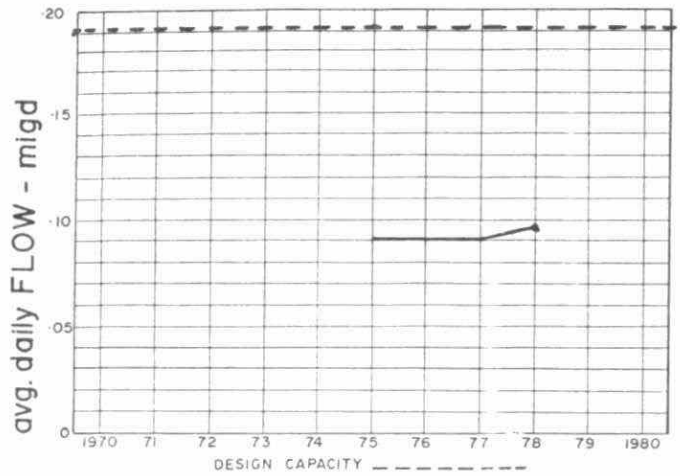
SLUDGE PUMP
Type: One, Midland AFP-4
Size: 425 usgpm

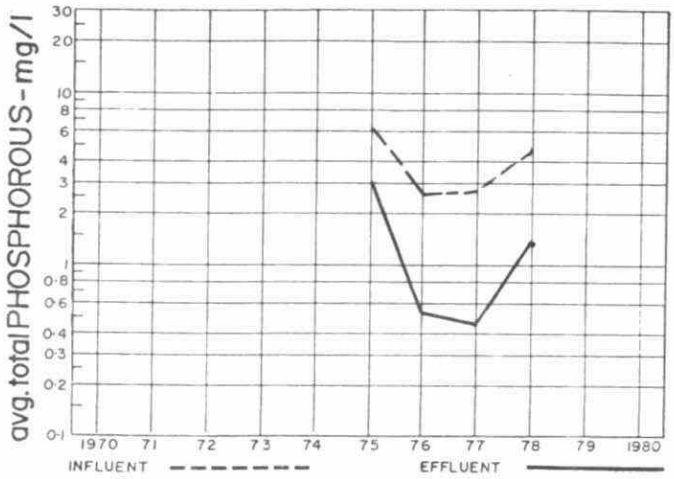
CHLORINE CONTACT CHAMBER
Volume: 9100 I.G.
Retention: 1.1 hr

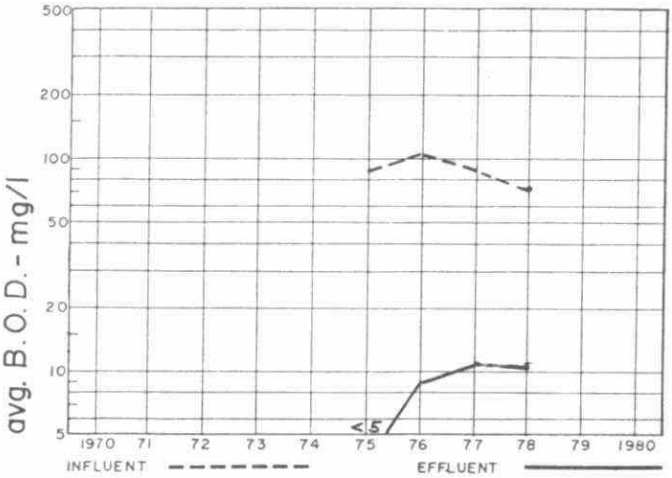
CHLORINATOR
Type: One F and P 70c

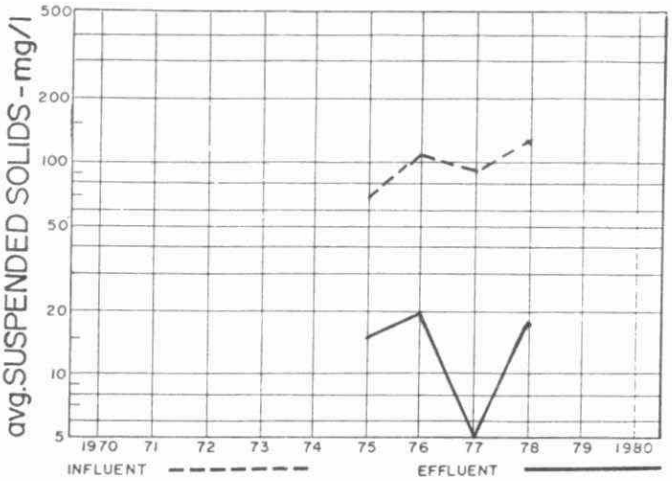
SLUDGE HOLDING TANK
12,500 I.G.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001863 — MARMORA STP

MUNICIPALITY : MARMORA
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,293

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.191 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.659	.118	.204		85.0	15.0	82	2.5	116.0	34.0	70	3.0	5.3	1.7	67	.1
FEB	2.472	.088			57.0	11.0	80	1.1	140.0	35.0	75	2.5	5.8	.9	84	.1
MAR	3.753	.121			54.0	8.0	85	1.7	95.0	15.0	84	3.0	4.4	1.6	63	.1
APR	7.857	.262	.402		38.0	7.0	81	2.4	67.0	22.0	67	3.5	3.1	1.8	41	.1
MAY	2.514	.081	.130		50.0	6.0	88	1.1	53.0	11.0	79	1.0	*	*		
JUN	1.697	.057	.074		122.0	8.0	93	1.9	185.0	11.0	94	2.9	3.9	.9	76	
JUL	1.300	.042	.051		110.0	6.0	94	1.3	120.0	24.0	80	1.2	3.4	1.8	47	
AUG	1.817	.059	.072		35.0	4.3	87	.5	139.0	8.0	94	2.3	5.7	3.3	42	
SEP	1.888	.063	.080		87.0	14.0	83	1.3	168.0	25.0	85	2.7	4.3	.8	81	
OCT	2.392	.077	.083		110.0	7.0	93	2.4	206.0	8.0	96	4.7	4.0	*		
NOV	2.693	.090	.119		80.0	15.0	81	1.7	189.0	19.0	89	4.5	4.2	*		
DEC	2.685	.087	.099		65.0	22.0	66	1.1	192.0	15.0	92	4.7	4.6	.6	86	.1
TOTAL	34.727							19.0				36.0				.5
AVERAGE		.095	MAXIMUM .402	MAXIMUM	74.4	10.2	86		139.1	18.9	86		4.4	1.4	66	
NO. OF SAMPLES					23	23			51	63			63	53		

MERRICKVILLE

Project: Village of Merrickville
WPCP

Project No: 1-0019-66

Treatment: Extended Aeration

Design Flow: 0.110 M.I.G.D.

BOD - Raw Sewage - 250 mg/l
- Removal 95%

SS - Raw Sewage - 250 mg/l
- Removal 95%

Sewage Pumps (at P.S.)
Size: Two, each 140 I.G.P.M. @ 50' TDH
One, 240 I.G.P.M. @ 50' TDH

Comminutor:
Type: One, CONDUX Mod 150

Grit Chamber
(at circumference of aeration tank)

Size: One, 20' x 1.2' x 1.2'
(180 I.G.)
Retention: 2.3 min

Aeration Tank
Type: One, circular
Size: 42' x id x 14' awd
(121,000 I.G.)
Retention: 26.4 hr

Aeration: spargers with rotor

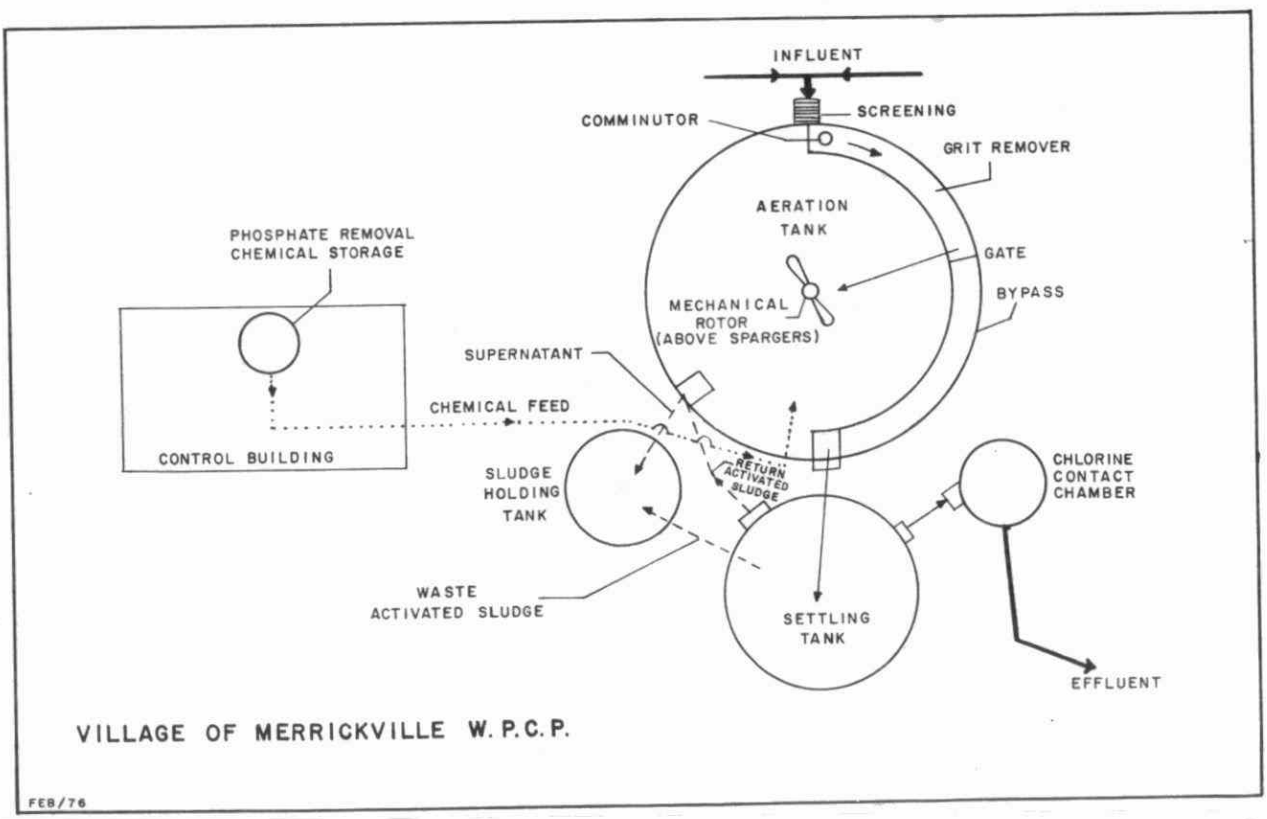
Blowers
Type: Two, SUTORBILT
Size: 265 cfm @ 4.5 psi

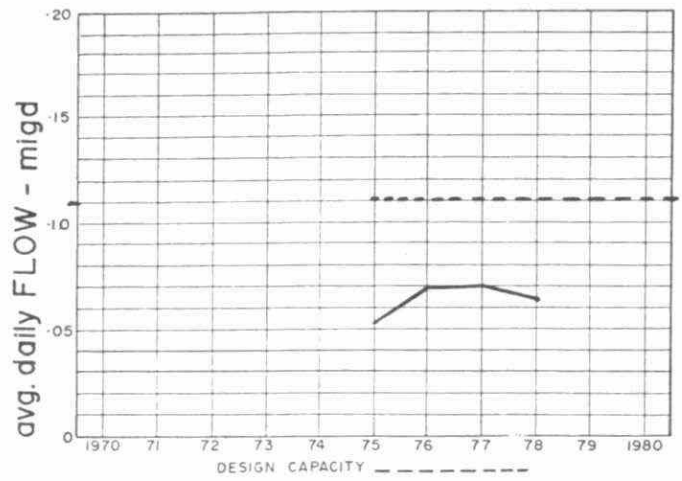
Clarifier
Type: One, circular
Size: 20' i.d. x 9' awd
17,600 I.G.
Retention: 3.8 hr
Loadings - Weir: 1930 I.G./ft/day
- Surface: 350 I.G./ft^2/day

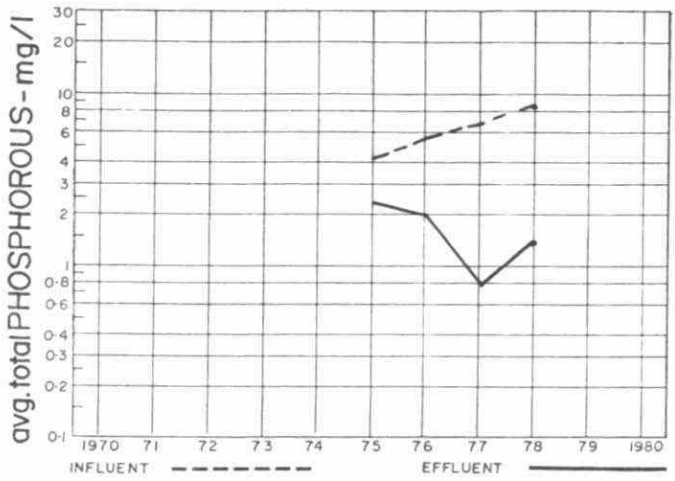
Chlorination Tank
Type: One, circular
Size: 7.5'i.d. x 9' awd
2480 I.G.
Retention: 32 min

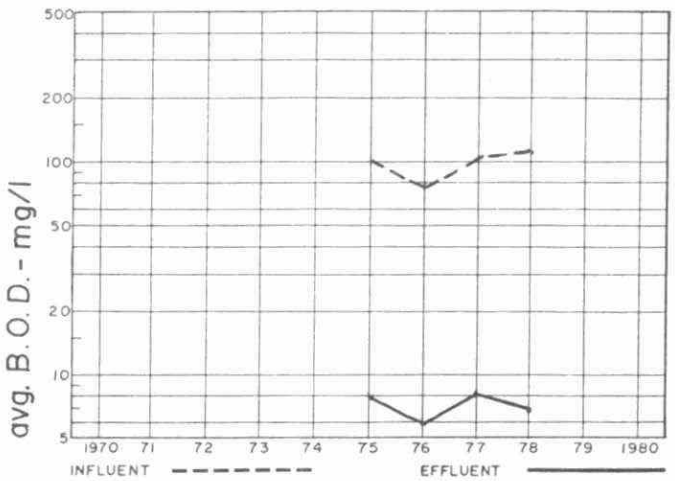
Chlorinator
Type: One, W and T Mod V800

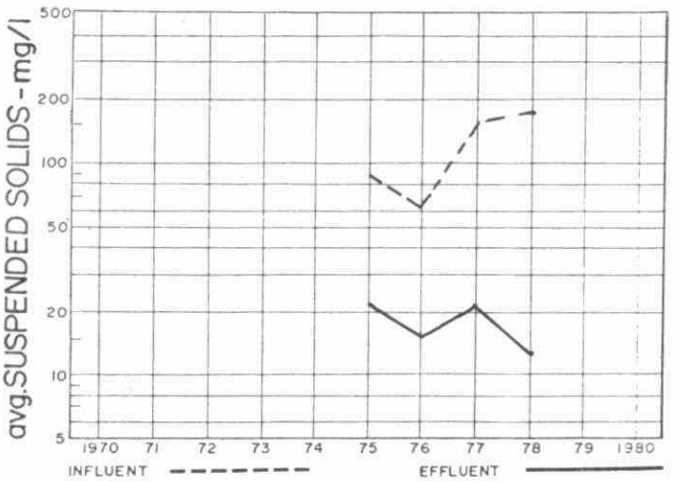
Sludge Holding Tank
Type: One, circular
Size: 11' i.d. x 13' awd
7710 I.G.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001729 — MERRICKVILLE WPCP

MUNICIPALITY : MERRICKVILLE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 934

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.110 MIGD — DESIGN BOD5 : 250.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.651	.117	.180	.335	48.0	8.0	83	1.4	68.0	9.2	86	2.1	4.7	.7	85	.1
FEB	2.116	.075	.123	.245	69.0	7.5	89	1.3	105.0	10.7	89	1.9	6.0			
MAR	2.400	.077	.134	.230	69.0	11.0	84	1.3	111.0	13.0	88	2.3	5.3	1.3	75	
APR	3.877	.129	.196	.470	33.0	13.0	60	.7	54.0	19.0	64	1.3	4.1			
MAY	2.294	.074	.190	.215	94.0	7.0	92	1.9	125.0	8.5	93	2.6	8.8	1.0	88	.1
JUN	1.530	.051	.065	.196	152.0	11.5	92	2.1	204.0	12.0	94	2.9	11.1	1.2	89	.1
JUL	1.397	.045	.053	.224	128.0	4.0	96	1.7	173.0	7.0	95	2.3	10.2	1.0	90	.1
AUG	1.435	.046	.056	.213	297.0	3.4	98	4.2	713.0	5.2	99	10.1	16.4	1.8	89	.2
SEP	1.410	.047	.063	.374	120.0	2.2	98	1.6	142.0	8.6	93	1.8	6.9	1.9	72	
OCT	1.301	.041	.049	.169	110.0	1.6	98	1.4	127.0	14.6	88	1.4	8.1	2.5	69	
NOV	1.250	.041	.051	.172	139.0	2.6	98	1.7	173.0	16.2	90	1.9	8.3	1.3	84	
DEC	1.206	.039	.049	.200	110.0	9.0	91	1.2	105.0	25.0	76	.9	7.9			
TOTAL	23.867							20.5				31.5				.6
AVERAGE		.065	MAXIMUM .196	MAXIMUM .470	114.0	6.7	94		175.0	12.4	92		8.1	1.4	82	
NO. OF SAMPLES					44	44			40	44			44	34		

PITTSBURGH (CANA)

PROJECT Pittsburgh Twp (Cana)

PROJECT NO. 2-0288-70
TREATMENT Extended Aeration

DESIGN FLOW 0.021 M I G D

DESIGN POPULATION 250

INFLUENT BOD 190 mg/l
SS 220 mg/l

EFFLUENT BOD 11 mg/l
SS 15 mg/l

PRIMARY TREATMENT

Bar screen and comminutor (Future)

SECONDARY TREATMENT

Aeration Tank:
Volume: 2150 ft^3
Loading: 13 lb. BOD/day/1000 ft^3
Detention: 21 Hours
Blowers: 2 providing 130 cfm @ 3.5 psi.

Secondary Sedimentation:
Volume: 400 ft^3
Detention: 4 hours
Loading: Surface, 300 gal/ft^2/day

SLUDGE HANDLING

Digestion System
Type: Aerobic
Volume: 1000 $ft.^3$

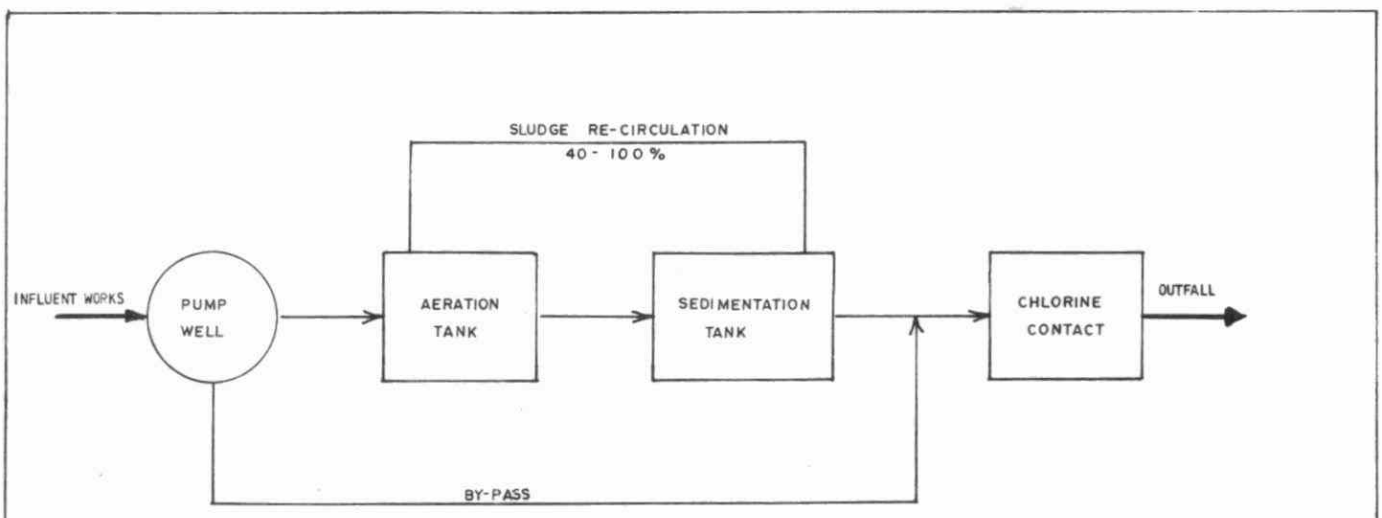
CHLORINATION

Retention: 30 minutes

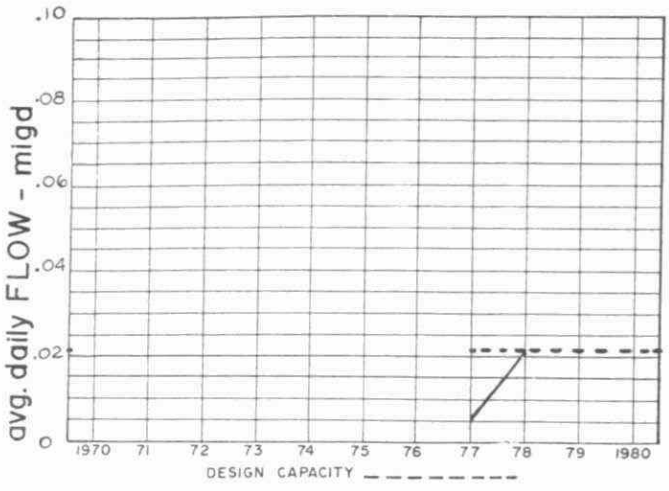
Pumping Station #1
2 pumps @ 100 IGPM @

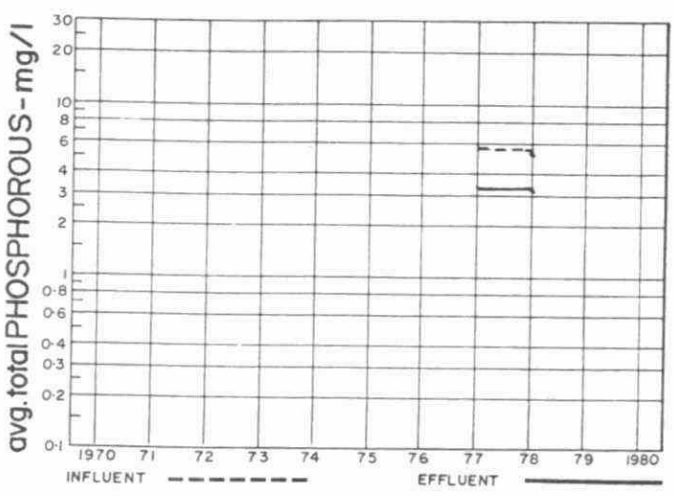
Outfall

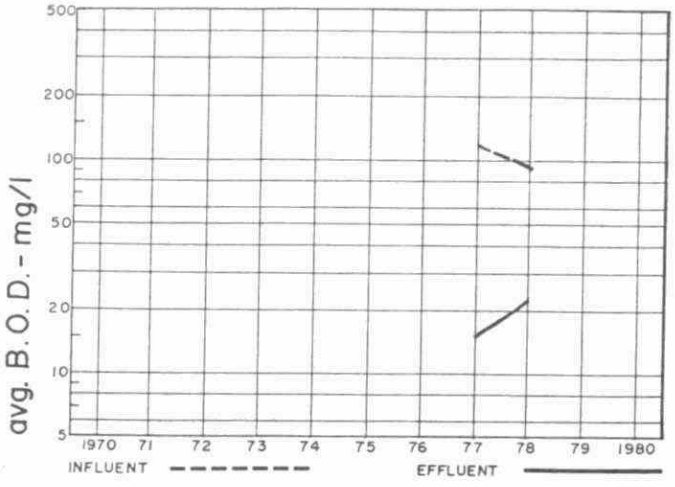
To Rideau Canal (Cataraqui River).

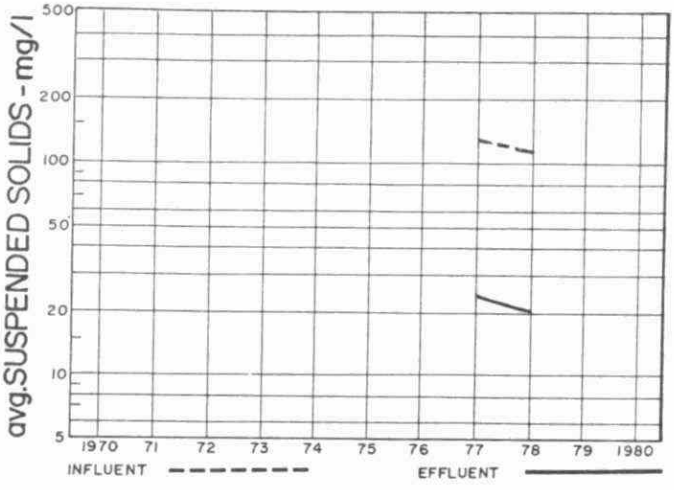


PITTSBURGH TWP. (CANA)
WPCP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001505 CANA WPCP

MUNICIPALITY : PITTSBURG CANA
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 9,702

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.021 MIGD DESIGN BOD5 : 190.0 MG/L DESIGN SUSP.SOLIDS : 220.0 MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.210	.039	.144		27.0	7.0	74	.2	26.0	25.0	3		1.8	1.0	44	
FEB	.775	.028	.086		61.0	30.0	50	.2	73.0	44.0	39	.2	4.3	3.9	9	
MAR	1.671	.054	.169		55.0	57.0	-	-	72.0	21.0	70	.8	2.9	2.7	6	
APR	1.106	.037	.108		45.0	43.0	4		31.0	18.0	41	.1	1.5	1.2	20	
MAY	.541	.017	.040		70.0	37.0	47	.1	84.0	25.0	70	.3	4.7	2.8	40	
JUN	.326	.011	.011		75.0	38.5	48	.1	125.0	28.8	76	.3	10.7	5.2	51	
JUL	.166	.005	.007		105.0	16.0	84	.1	118.0	12.0	89	.1	7.8	5.8	25	
AUG	.219	.007	.014		180.0	18.5	89	.3	403.0	11.0	97	.8	10.9	3.6	66	
SEP	.334	.011	.032		151.0	4.0	97	.4	164.0	10.4	93	.5	7.8	2.7	65	
OCT	.331	.011	.014		128.0	4.7	96	.4	113.0	13.7	87	.3	6.2	4.5	27	
NOV	.425	.014	.031		125.0	5.3	95	.5	92.0	21.3	76	.3	4.0	3.9	2	
DEC	.611	.020	.038		73.0	6.3	91	.4	72.0	22.8	68	.3	2.5	3.1	-	-
TOTAL	7.715							2.7				4.0				
AVERAGE		.021	MAXIMUM .169	MAXIMUM	91.2	22.2	75		114.4	21.0	81		5.4	3.3	37	
NO. OF SAMPLES					39	37			56	56			23	23		

Ministry of the Environment
Ontario

Northeastern Region
(5)

REGIONAL OFFICE

SUDBURY
199 Larch St.
705-675-4501

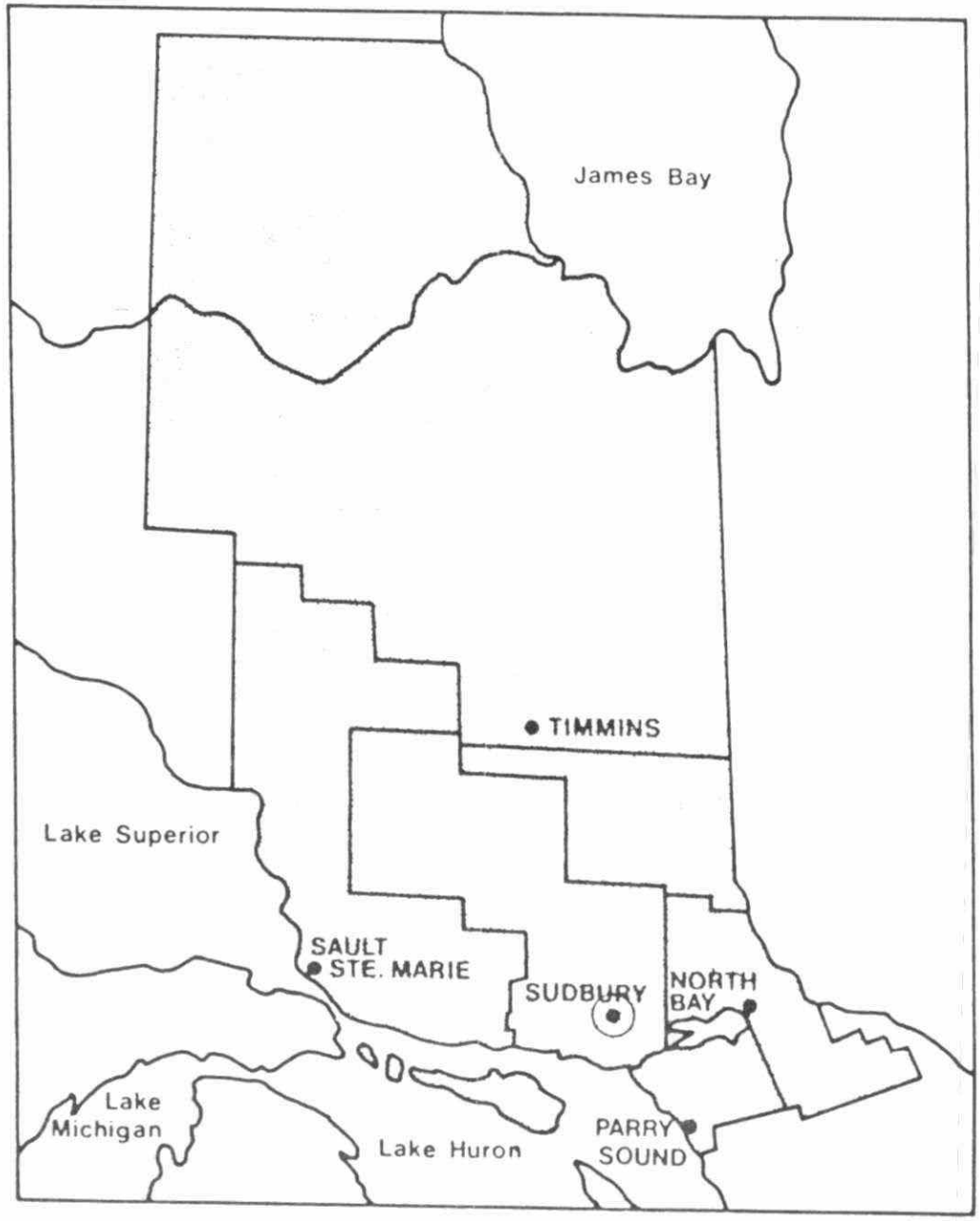
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

BLACK R. - MATHESON (M.)

PROJECT Town of Matheson WPCP

PROJECT NO. 1-0150-68

TREATMENT Extended Aeration

DESIGN FLOW 0.15 MGD

SEWAGE PUMPING STATIONS

No. 1 Two (2) submersible pumps 100 gpm @ 32.5' T.D.H.

No. 2 Two (2) submersible pumps 460 gpm @ 37.0' T.D.H.

No. 3 Two (2) submersible pumps 100 gpm @ 39.0 T.D.H.

PRETREATMENT

GRIT REMOVAL
2 grit channels 2' x 16' each
Total Volume: 13 cu. ft.
Retention: 2 weeks

COMMINUTOR
10" Cord Model 10A. 1.0 h.p.

SECONDARY TREATMENT

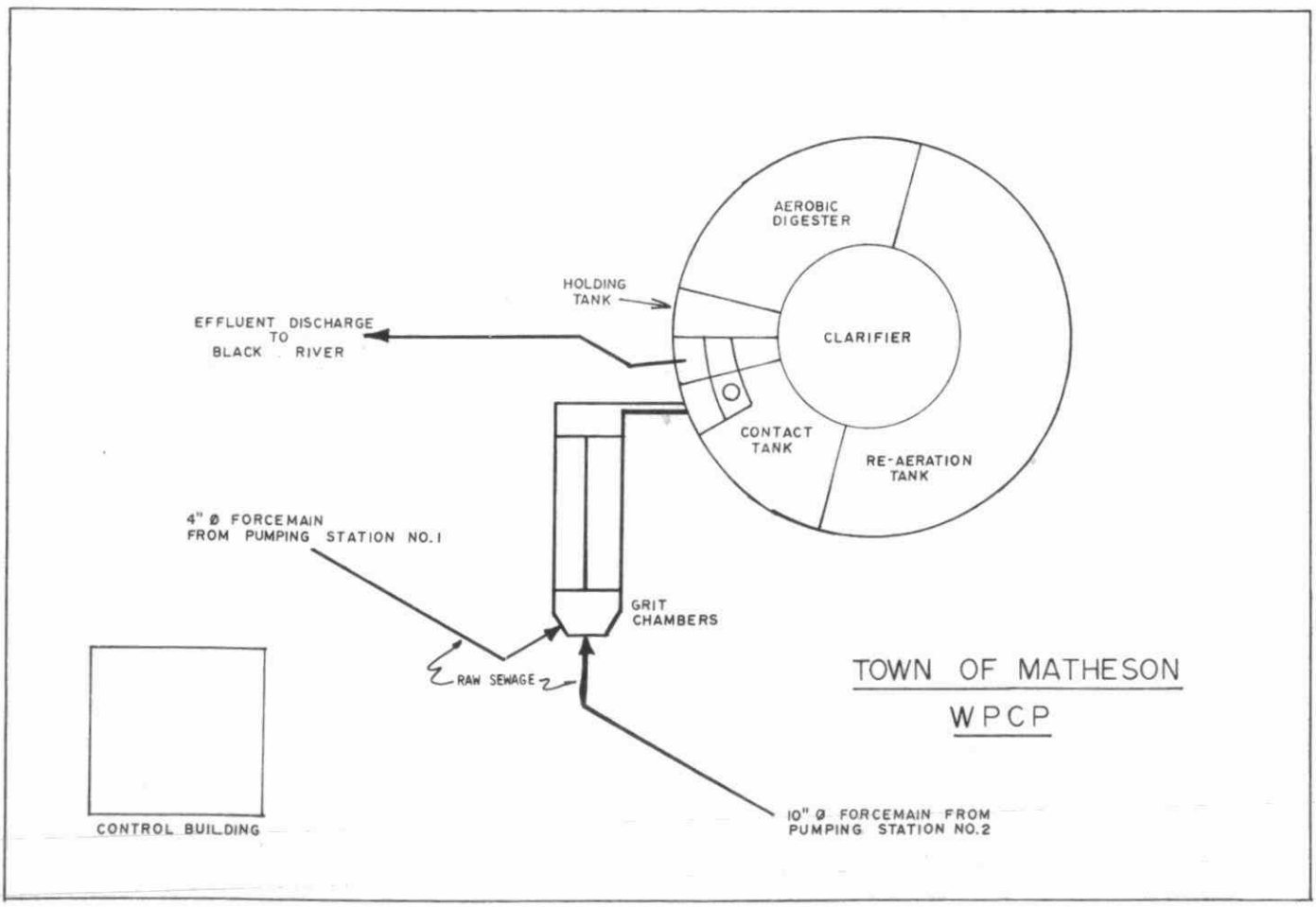
AERATION
Contact Tank Volume: 33,154 gal.
Retention: 3.5 hrs.
Reaeration Tank Volume: 86,914 gal.
Retention: 9.1 hrs.
Aerobic Digester Volume: 79,257 gal.
Retention: 14.4 hrs.
Total Aeration Volume: 169,325 gal.
Retention: 27 hrs.

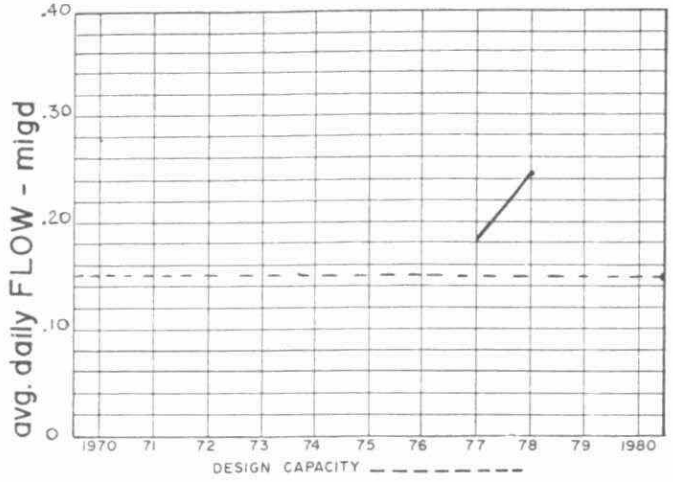
AIR SUPPLY
2 blowers delivering 1500 cfm
Motors: 75 h.p. @ 3560 r.p.m. 60A.

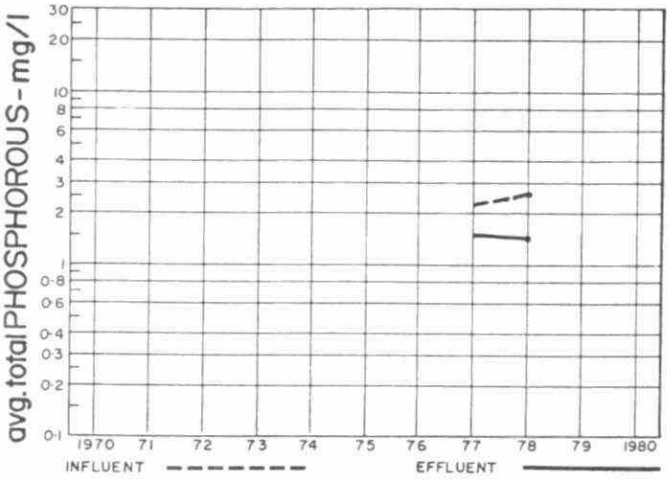
CLARIFIER
Size: 30' dia. x 18.5 avg. SWD
Volume: 81,500 gal.
Loading: Surface = 212 IG/ft^2/day
Weir = 1595 IG/ft^2/day

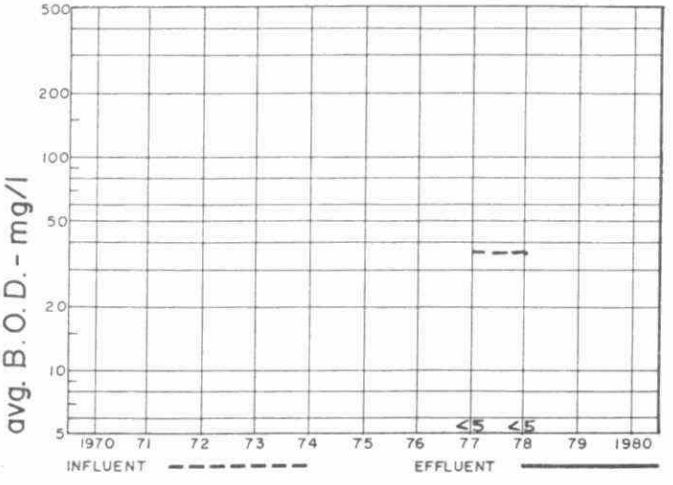
CHLORINATION

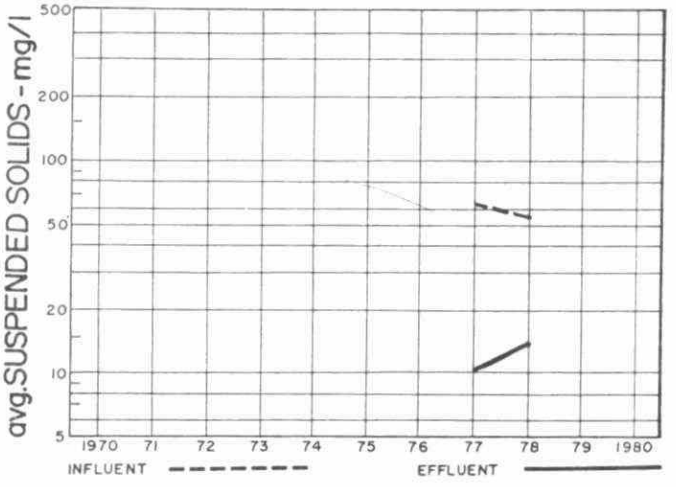
CHLORINE CONTACT TANK
Volume: 4673 gal.
Retention: 45 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000025 — MATHESON WPCP

MUNICIPALITY : BLACK RIVER MATHESON
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 3,567

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.150 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	6.397	.206	.231	.310	66.0	3.0	95	4.0	128.0	7.0	94	7.7	2.6	.8	69	.1
FEB	5.315	.189	.216		34.0	2.0	94	1.7	39.0	6.0	84	1.7	3.2	1.9	40	
MAR	6.143	.198	.260		32.0	3.0	90	1.7	45.0	5.0	88	2.4	3.8	2.3	39	
APR	9.574	.319	.519	.780	37.0	7.0	81	2.8	38.0	13.0	65	2.3	2.8	*		
MAY	10.206	.329	.434	.660	19.0	5.2	72	1.4	30.0	*			1.9	*		
JUN	9.792	.326	.670	.680	25.0	6.0	76	1.8	60.0	32.5	45	2.6	1.9	1.8	5	
JUL	8.695	.280	.449	.820	35.0	2.0	94	2.8	60.0	12.0	80	4.1	2.1	1.0	52	
AUG	6.839	.220	.288	.480	18.0	4.8	73	.9	30.0	5.5	81	1.6	1.7	1.8	-	-
SEP	6.146	.204	.235	.380	40.0	2.4	94	2.3	82.0	15.0	81	4.1	2.8	*		
OCT	8.063	.260	.464	.630	33.0	3.3	90	2.3	45.0	19.0	57	2.0	2.8	1.6	42	
NOV	6.537	.217	.355	.610	40.0	7.7	80	2.1	45.0	30.0	33	.9	3.0	1.4	53	.1
DEC	5.757	.185	.226	.290	65.0	11.0	83	3.1	77.0	12.0	84	3.7	3.3	1.5	54	.1
TOTAL	89.464							26.9				33.1				.3
AVERAGE		.244	MAXIMUM .670	MAXIMUM .820	37.0	4.7	87		56.5	14.2	74		2.6	1.5	41	
NO. OF SAMPLES					25	23			24	17			25	15		

LATCHFORD

PROJECT: Town of Latchford WPCP

PROJECT NO: 2-0140-68

TREATMENT: Extended Aeration

DESIGN FLOW: .075 MIGD

DESIGN BOD: 200.0 mg/l

DESIGN S S: 233.0 mg/l

GRIT CHANNELS
Two

COMMINUTOR

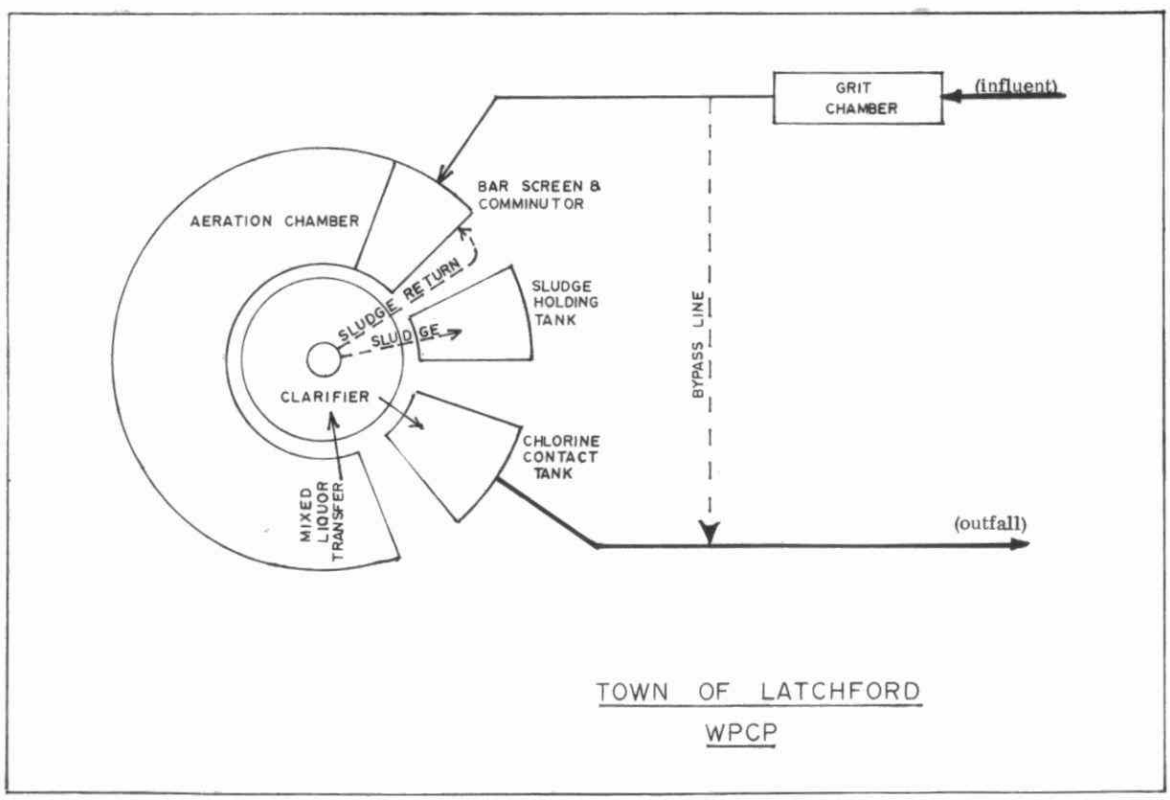
AERATION TANK
Volume: 73,000 IG
Retention: 23.4 hr

BLOWERS
Three, each 125 cfm @ 5½ psi

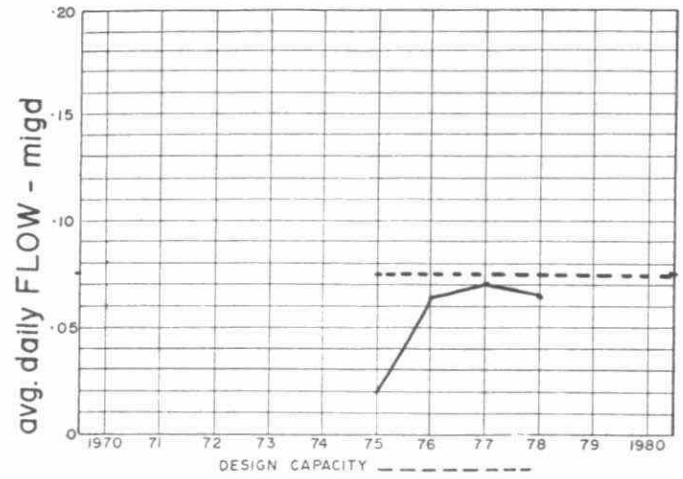
CLARIFIER
Size: One
Volume: 15,700 IG
Retention: 5.0 hr

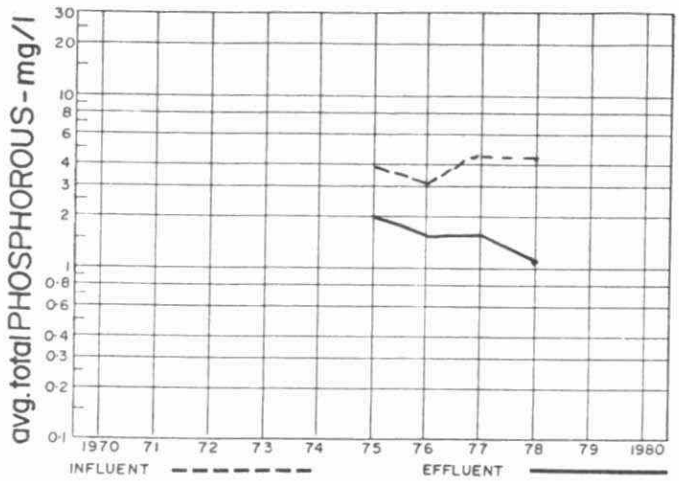
SLUDGE HOLDING TANK
Volume: 2440 IG

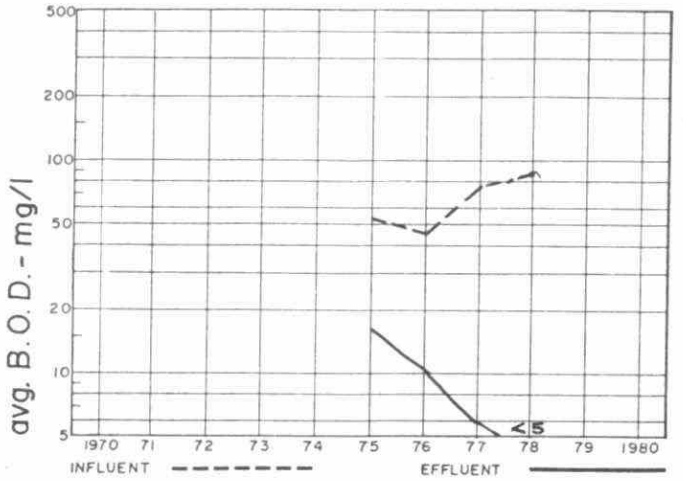
CHLORINE CONTACT CHAMBER
Volume: 1585 IG
Retention: 30 min

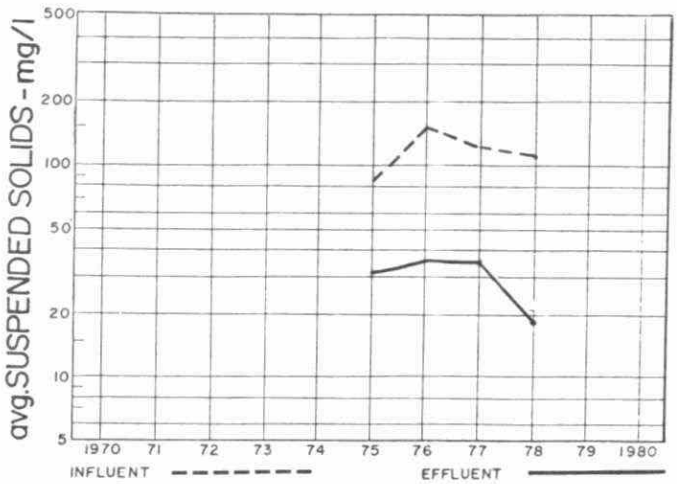


TOWN OF LATCHFORD
WPCP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001774 — LATCHFORD WPCP

MUNICIPALITY : LATCHFORD
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

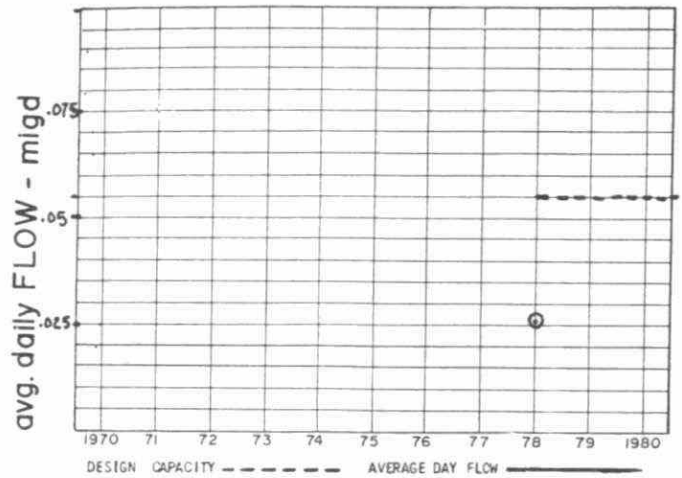
CURRENT POPULATION : 456

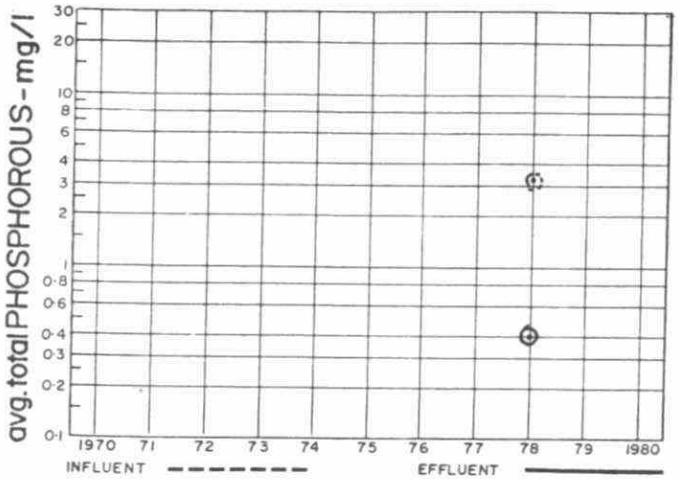
OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

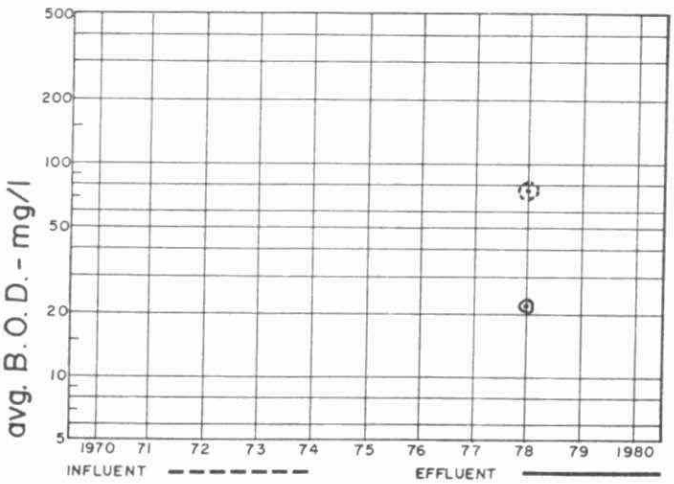
DESIGN CAPACITY : 0.075 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 233.0 MG/L

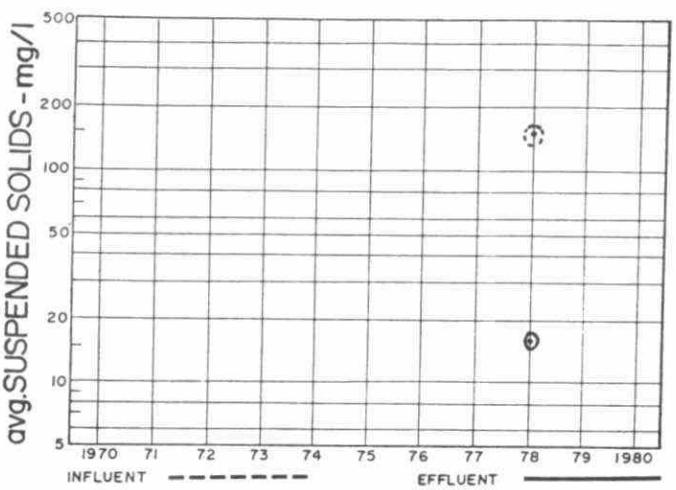
	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.021	.065	.081	.432	98.0	7.0	92	1.8	110.0	29.0	73	1.6	4.9	1.6	67	
FEB	1.729	.062	.088	.432	110.0	4.0	96	1.8	85.0	16.0	81	1.1	4.4	.8	81	
MAR	2.128	.068	.088	.432	103.0	6.0	94	2.0	110.0	23.0	79	1.8	5.4	1.2	77	
APR	2.553	.085	.126	.432	78.0	7.0	91	1.8	74.0	22.0	70	1.3	4.4	1.2	72	
MAY	2.494	.080	.112	.432	48.0	2.8	94	1.1	116.0	17.0	85	2.4	3.2	1.2	62	
JUN	2.104	.070	.099	.432	83.0	3.0	96	1.6	100.0	17.0	83	1.7	4.5	1.0	77	
JUL	1.928	.062	.085	.432	93.0	2.7	97	1.7	228.0	18.5	91	4.0	5.6	1.1	80	
AUG	1.929	.062	.099	.432	100.0	2.5	97	1.8	155.0	40.0	74	2.2	3.5	1.5	57	
SEP	1.501	.050	.067	.432	55.0	2.0	96	.7	60.0	15.0	75	.6				
OCT	2.052	.066	.093	.432	72.5	1.6	97	1.4	200.0	17.5	91	3.7				
NOV	1.716	.057	.075	.432	90.0	1.8	98	1.5	102.0	17.7	82	1.4	4.3	.9	79	
DEC	1.776	.057	.069	.432	55.0	2.2	96	.9	80.0	5.0	93	1.3	4.6	.6	86	
TOTAL	23.931							18.1				23.1				
AVERAGE		.065	MAXIMUM .126	MAXIMUM .432	82.1	3.5	95		118.3	19.8	83		4.4	1.1	75	
NO. OF SAMPLES					19	19			23	23			17	17		

MOOSONEE (NORTH)









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120000319 — MOOSONEE D.A.B.(NORTH)

MUNICIPALITY : MOOSONEE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 1,327

* NO DATA AVAILABLE

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.055 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.787	.025	.052		65.0	15.0	76	.3	150.0	19.0	87	1.0	4.2	.5	88	
FEB	.824	.029	.070		130.0	5.0	96	1.0	305.0	12.0	96	2.4	*	.2		
MAR	.771	.025	.053		85.0	50.0	41	.2	90.0	20.0	77	.5	3.7	.5	86	
APR	.788	.026	.033		*	*			*	*			*	*		
MAY	.900	.030			*	*			*	*			*	*		
JUN	.813	.027	.034	.021	24.0	*			55.0	*			1.8	*		
JUL	.733	.023	.030		*	*			*	*			*	*		
AUG	.698	.023	.028	.017	*	*			*	*			*	*		
SEP	.809	.027	.047		*	*			*	*			*	*		
OCT	.764	.024	.034		*	*			*	*			*	*		
NOV	.807	.027	.034		*	*			*	*			*	*		
DEC	.976	.031	.041	.024	*	*			*	*			*	*		
TOTAL	9.670							1.5				3.9				
AVERAGE		.026	MAXIMUM .070	MAXIMUM .024	76.0	23.3	69		150.0	17.0	88		3.2	.4	87	
NO. OF SAMPLES					4	3			4	3			3	3		

RAYSIDE-BALFOUR (AZILDA)

PROJECT: Rayside - Balfour
Azilda WPCP

PROJECT NO. 1-0108-67

TREATMENT: Extended Aeration

DESIGN FLOW: .400 migd

BRABANT CREEK P.S.
Type: Two, Crane-Deming
Size: each 1700 igpm @66' TDH

PRINCIPAL ST. P.S.
Type: Two Allis-Chalmers
Size: each 630 igpm @70' TDH

GRIT CHANNELS
Size: Three, each 34.25' x 2' x 2.9'
Volume: (total) 3720 I.G.
Retention: (total) 8.6 min

COMMINUTOR
Type: Cord
Size: 16"

AERATION TANK
Volume: 455,770 I.G.
Retention: 17.3 hr

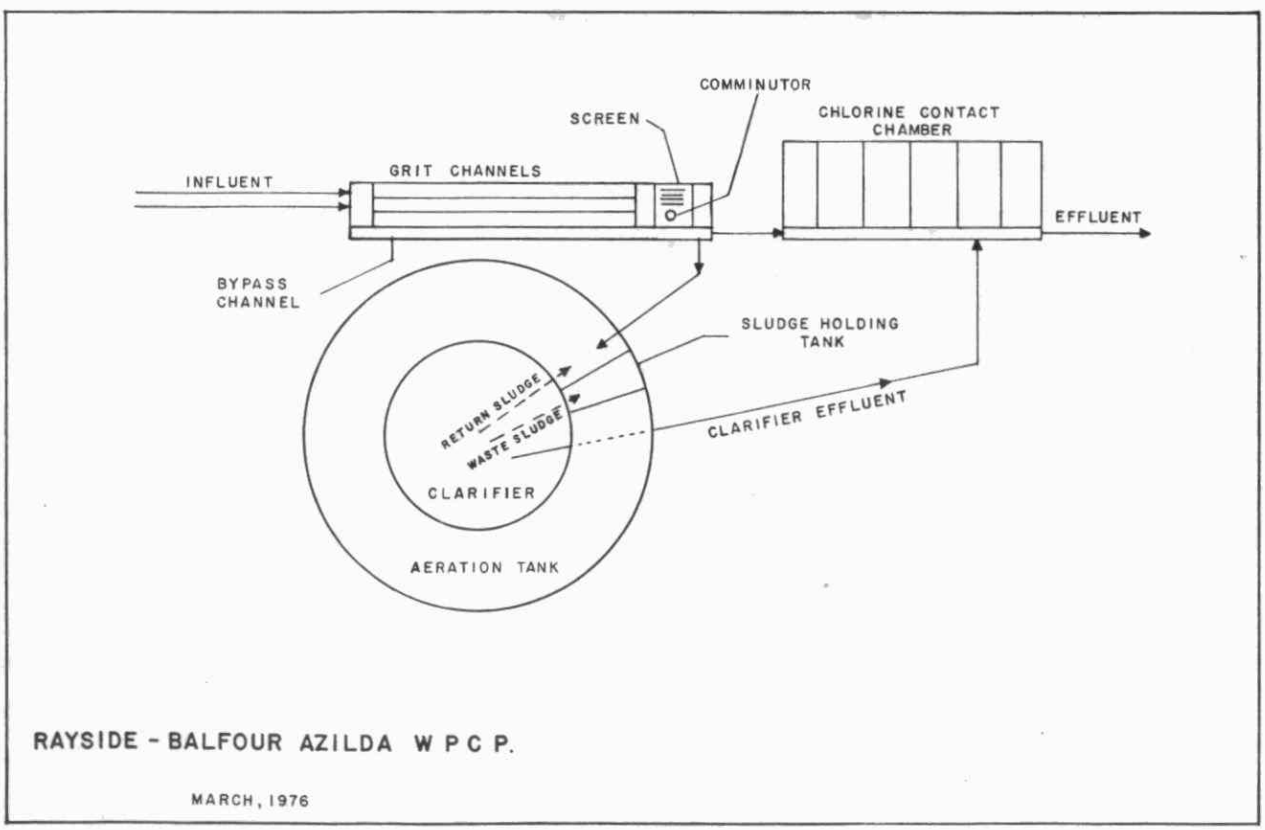
CLARIFIER
Size: 57' dia
Volume: 205,800 I.G.
Retention: 7.5 hr
Loading:
- Surface 245 I.G./ft^2/day
- Weir 3492 I.G./ft/day

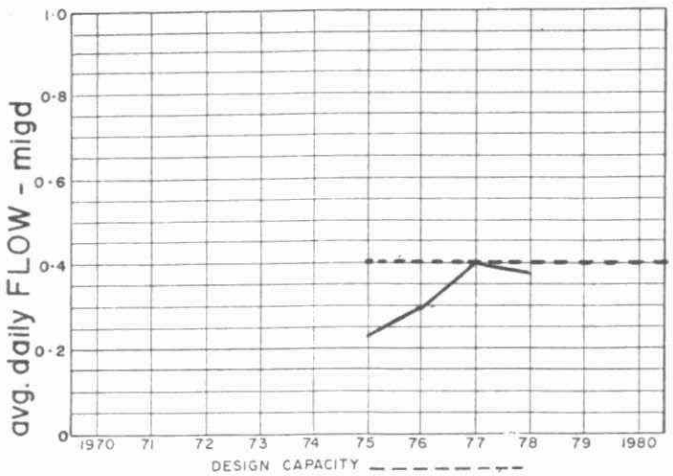
BLOWERS
Type: Two Hoffmann 38407
Size: each 1680 cfm

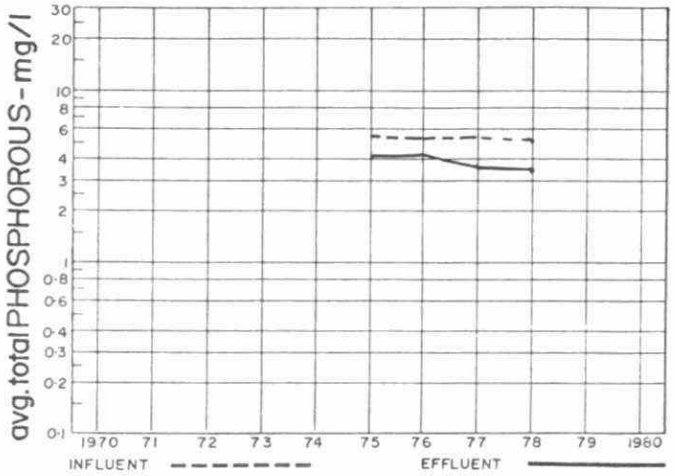
SLUDGE HOLDING TANK
Volume: 18,700 I.G.

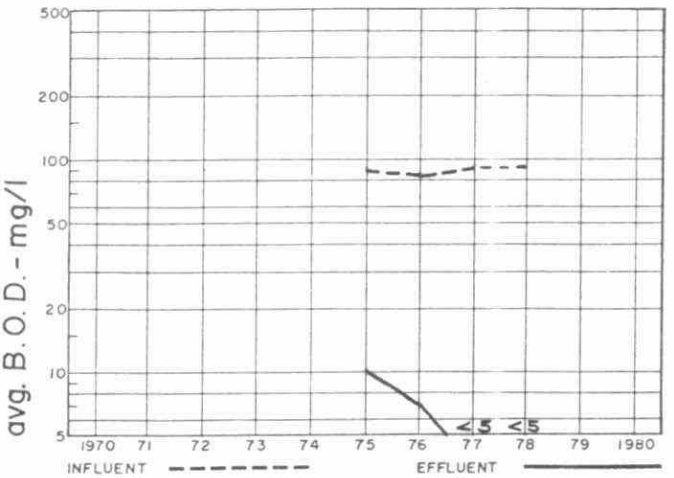
CHLORINE CONTACT TANK
Type: 5-pass
Volume (total): 25,600 I.G.
Retention: 58 min.

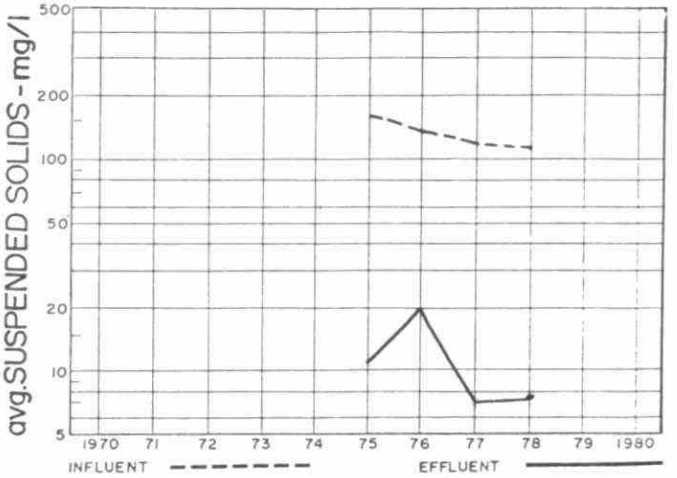
SLUDGE PUMP
Type: Flygt
Size: 4-inch











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001783 AZILDA WPCP

MUNICIPALITY : RAYSIDE-BALFOUR AZILDA
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 15,369

* N O DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.400 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	8.798	.283	.340		130.0	3.0	97	11.1	129.0	5.0	96	10.9	7.7	*		
FEB	6.781	.242	.270		130.0	3.0	97	8.6	95.0	8.0	91	5.8	8.2	4.5	45	.2
MAR	7.597	.245	.436		175.0	4.0	97	12.9	167.0	9.0	94	12.0	8.3	5.5	33	.2
APR	21.780	.726	1.030		34.0	5.0	85	6.3	101.0	13.0	87	19.1	2.3	1.7	26	.1
MAY	17.200	.554	.886	4.300	41.0	3.5	91	6.4	136.0	12.2	91	21.2	*	1.9		
JUN	7.993	.266	.306	4.320	58.0	5.0	91	4.2	135.0	10.0	92	9.9	3.9	*		
JUL	7.029	.226	.253	4.300	120.0	5.0	95	8.0	150.0	6.3	95	10.1	6.3	4.2	33	.1
AUG	8.173	.263	.400	4.300	200.0	2.8	98	16.1	182.0	5.7	96	14.4	6.9	3.4	50	.2
SEP	12.989	.432	.818	4.300	80.0	2.3	97	10.0	113.0	6.6	94	13.8	5.0	3.7	26	.1
OCT	20.019	.645	.900	4.300	17.0	1.4	91	3.1	46.0	5.5	88	8.1	1.7	*		
NOV	13.510	.450	.520	4.300	37.0	1.4	96	4.8	90.0	4.0	95	11.6	2.2	2.5	-	-
DEC	10.170	.328	.380	4.300	59.0	4.3	92	5.5	94.0	5.8	93	8.9	4.0	3.7	7	
TOTAL	142.039							97.0				145.8				.9
AVERAGE		.388	MAXIMUM 1.030	MAXIMUM 4.320	90.0	3.3	96		119.8	7.5	93		5.1	3.4	32	
NO. OF SAMPLES					21	20			60	62			19	15		

RAYSIDE-BALFOUR (CHELMSFORD)

Project: Chelmsford WPCP
Project No: 2-1004-73
Design Flow: 0.675 M I G D
Treatment: Extended Aeration
(or Contact Stabilization)

GRIT REMOVAL
Type: Grit Remover Cyclone

BIOLOGICAL TREATMENT
One of two identical units described hereunder

CONTACT CHAMBER
Volume: 21,500 I.G.
Retention: 0.86 hr
Diffusers: Coarse Bubble

RE-AERATION CHAMBER
Volume: 156,000 I.G.
Retention: 6.2 hr
Diffusers: Coarse Bubble

ON-SITE LIFT STATION
Type: Smart & Turner (Three)
Size: 1-600 GPM & 220 GPM (Two speed)
2-1200 GPM

CLARIFIER
Volume: 164,000 I.G.
Retention: 6.6 hr

AEROBIC DIGESTER NO. 1
Volume: 65,500 I.G.
Diffusers: Coarse Bubble

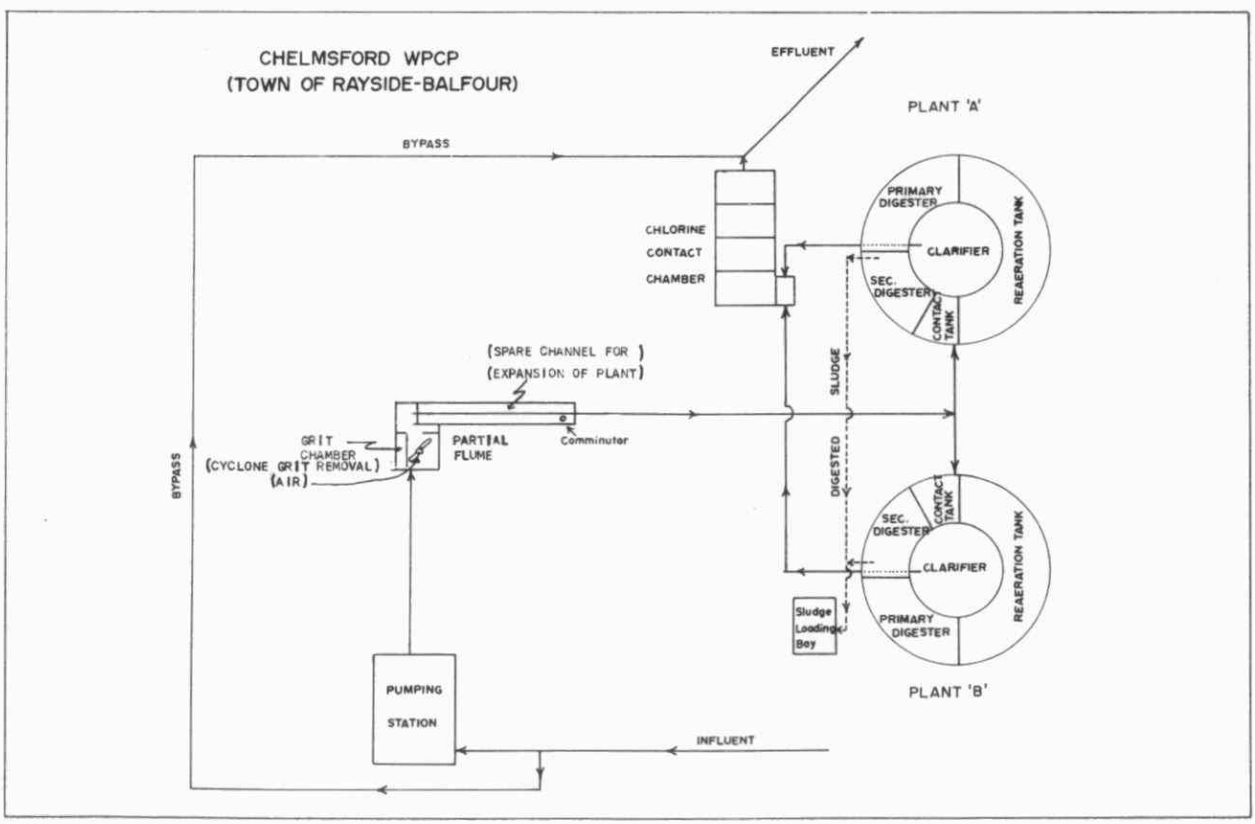
AEROBIC DIGESTER NO. 2
Volume: 65,500 I.G.
Diffusers: Coarse Bubble

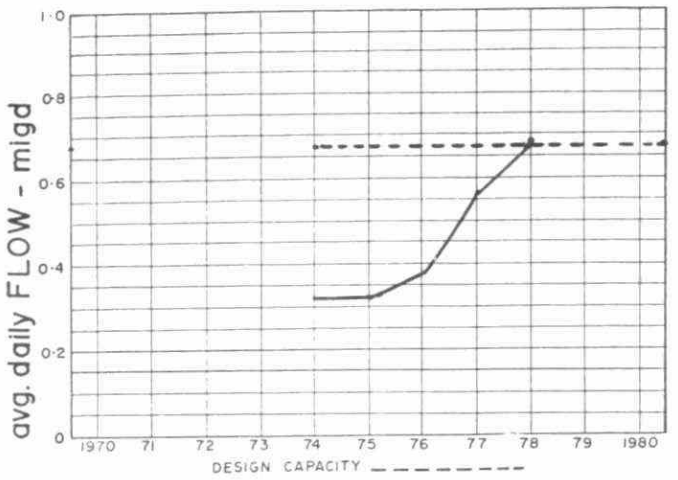
CHLORINE CONTACT CHAMBER
Common to both plants
Volume: 30,000 I.G.
Retention: 36 min

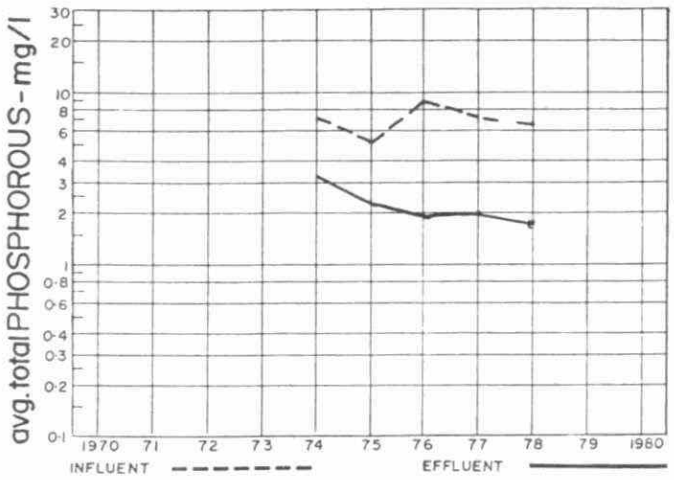
BLOWERS
Type: Spencer
Size: Each 2280 C.F.M.

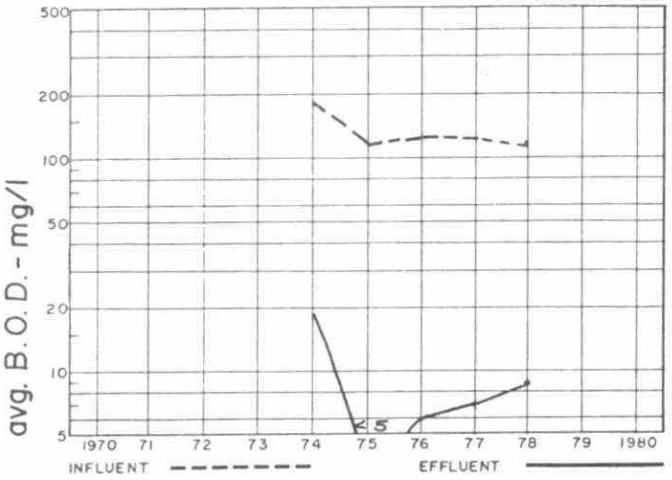
COMMINUTOR
Type: Infilco
Size: 16"

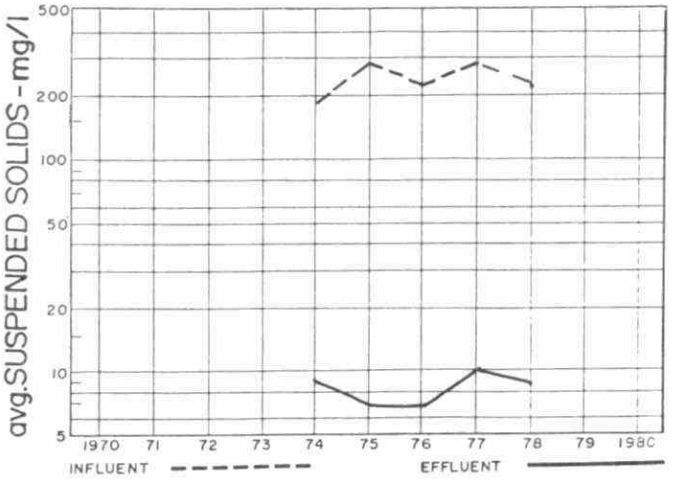
SLUDGE PUMP
Type: Flygt
Size: 4"











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120001568 — CHELMSFORD WPCP

MUNICIPALITY : RAYSIDE BALFOUR CHELMSFO
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 15,369

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.675 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	14.110	.450	.530		125.0	4.0	96	17.0	208.0	6.8	96	28.3	7.3	2.7	63	.6
FEB	13.990	.500	.540		120.0	4.7	96	16.1	215.0	7.5	96	29.0	11.0	3.4	69	1.0
MAR	15.440	.500	.620		140.0	6.2	95	20.6	280.0	9.0	96	41.8	9.3	3.3	64	.9
APR	32.290	1.070	1.550		75.0	9.0	88	21.3	130.0	22.0	83	34.8	5.1	1.9	62	1.0
MAY	28.170	.939	1.350	2.350	90.0	25.0	72	18.3	118.0	20.6	82	27.4	3.8	1.6	57	.6
JUN	15.780	.526	.590	1.900	150.0	6.7	95	22.6	172.0	6.9	95	26.0	7.2	2.8	61	.6
JUL	17.590	.560	.650	1.700	135.0	9.7	92	22.0	250.0	8.2	96	42.5	8.2	1.3	84	1.2
AUG	18.340	.590	.820	1.700	77.0	3.5	95	13.4	218.0	5.6	97	38.9	4.9	1.2	75	.6
SEP	23.440	.780	.990	1.700	70.0	4.4	93	15.3	247.0	4.5	98	56.8	5.0	.4	92	1.0
OCT	30.710	.990	1.480	1.700	70.0	5.0	92	19.9	272.0	5.8	97	81.7	3.9	1.3	66	.7
NOV	22.780*	.760	.900	1.700	90.0	10.0	88	18.2	240.0	5.0	97	53.5	6.1	1.0	83	1.1
DEC	18.680	.600	.690	1.700	117.0	16.0	86	18.8	270.0	7.1	97	49.1	7.4	1.3	82	1.1
TOTAL	251.320							223.5				509.8				10.4
AVERAGE		.689	MAXIMUM 1.550	MAXIMUM 2.350	104.9	8.6	91		218.3	9.0	95		6.6	1.8	71	
NO. OF SAMPLES					22	22			104	156			22	22		

SMOOTH ROCK FALLS

PROJECT Town of Smooth Rock Falls

PROJECT NO. 1-0097-67
TREATMENT Extended Aeration
DESIGN FLOW 0.36 mgd
DESIGN POPULATION 3000

BOD - Raw Sewage 150 mg/l
- Removal 90%

SS - Raw Sewage 150 mg/l
- Removal 90%

SECONDARY TREATMENT

Aeration Tank

Volume: 41,700 ft.^{3}
Detention: 17.25 hr.

Secondary Sedimentation

Size: 43' dia. 10 SWD 12' CWD
Loading: Weir, 2650 gal./ft./day
Detention: 48 min.

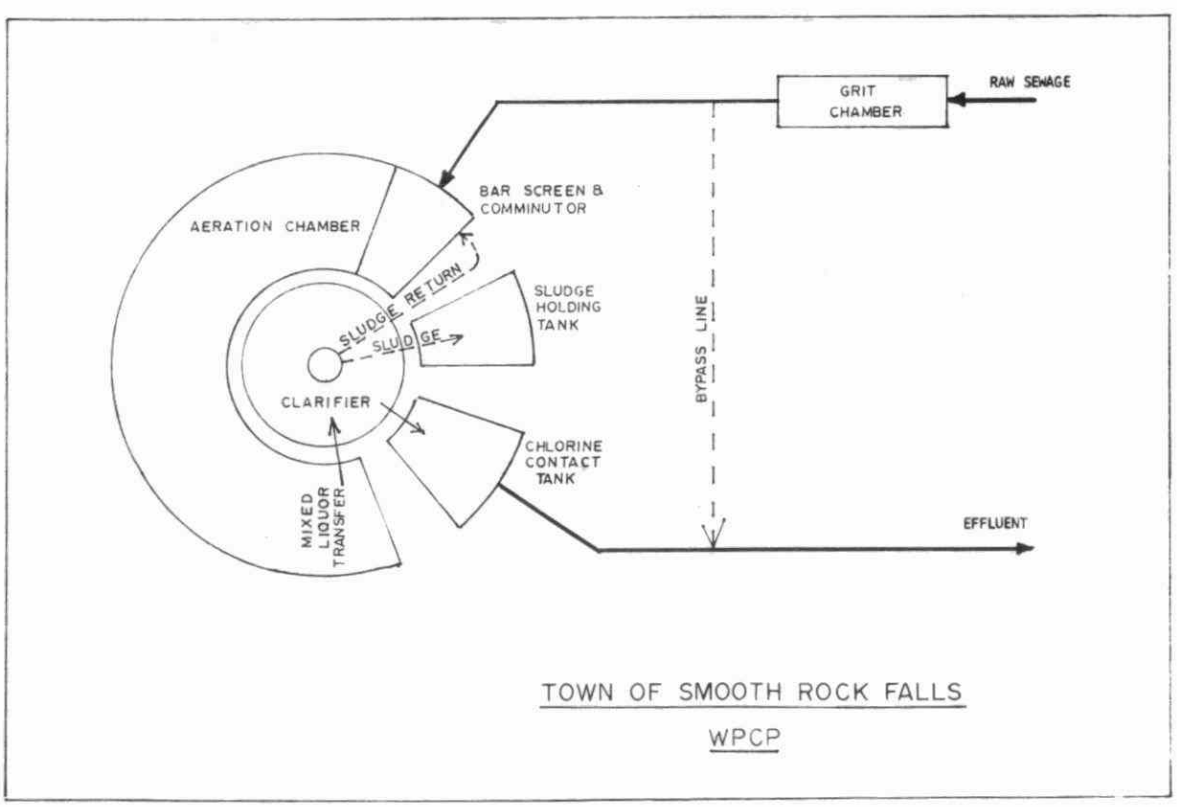
SLUDGE HANDLING

Holding Tank Volume: 1500 ft.^{3}

CHLORINATION

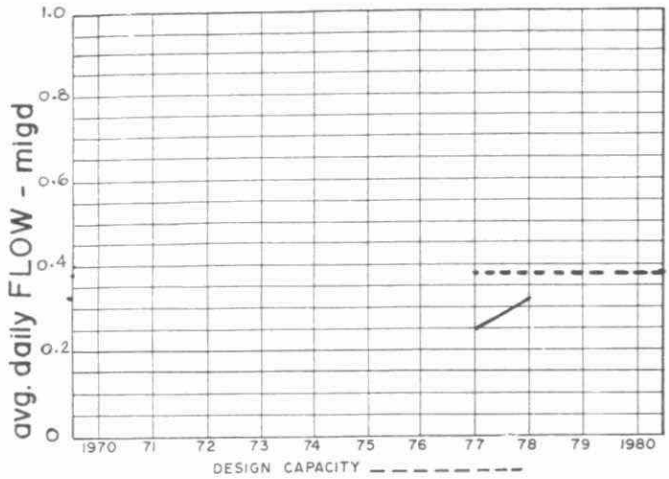
Chlorine Contact Chamber

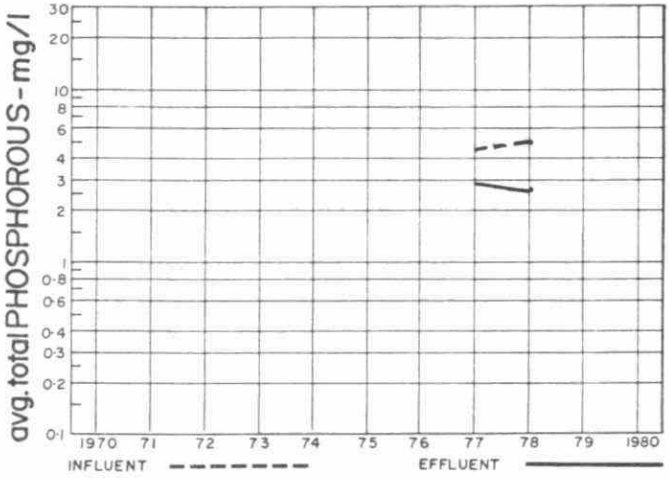
Size: 1200 ft.^{3}

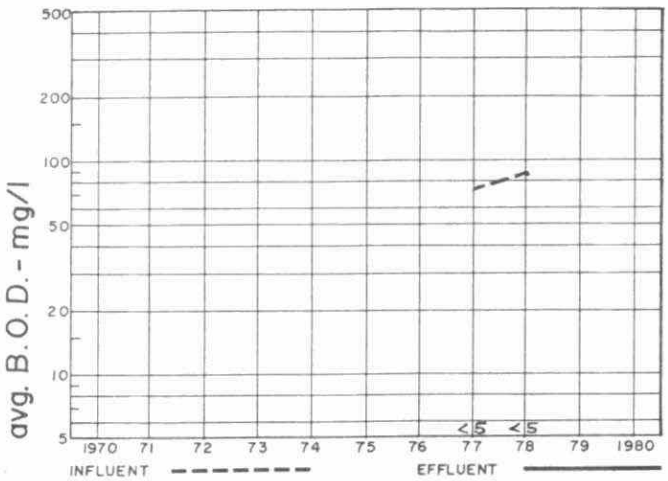


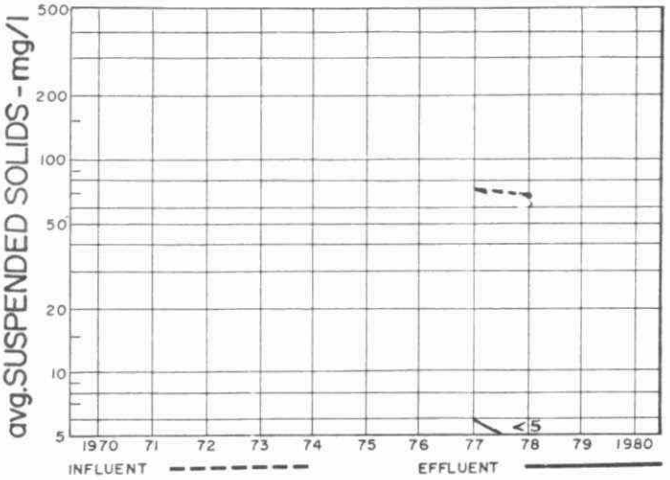
TOWN OF SMOOTH ROCK FALLS

WPCP









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002130 — SMOOTH ROCK FALLS WPCP

MUNICIPALITY : SMOOTH ROCK FALLS
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 2,373

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.360 MIGD — DESIGN BOD5 : 150.0 MG/L — DESIGN SUSP.SOLIDS : 150.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	12.864	.415	.660		*	*			46.0	5.0	89	5.2	*	*		
FEB	15.840	.566	.620		*	3.0			49.0	5.0	89	6.9	*	*		
MAR	6.200	.200			68.0	2.0	97	4.0	68.0	5.0	92	3.9	5.5	3.7	32	.1
APR	14.800	.492	.817		85.0	3.0	96	12.1	64.0	5.0	92	8.7	5.6	1.9	66	.5
MAY	11.238	.363	.534		98.0	4.4	95	10.5	114.0	5.0	95	12.2	4.3	2.0	53	.2
JUN	9.552	.318	.531		60.0	3.0	95	5.4	60.0	5.0	91	5.2	4.7	*		
JUL	9.179	.296	.519		64.0	2.8	95	5.6	48.0	5.0	89	3.9	3.0	2.6	13	
AUG	7.112	.229	.285		75.0	1.9	97	5.1	45.0	5.0	88	2.8	4.0	*		
SEP	8.035	.268	.462		130.0	.8	99	10.3	110.0	5.0	95	8.4	7.7	*		
OCT	9.843	.318	.579		53.0	3.3	93	4.8	83.0	5.0	93	7.6	2.1	*		
NOV	6.368	.212	.267		135.0	1.6	98	8.4	60.0	.5	99	3.7	7.7	2.6	66	.3
DEC	5.975	.193	.222		73.0	1.5	97	4.2	76.0	5.0	93	4.2	4.7	3.3	29	
TOTAL	117.006							70.4				72.7				1.1
AVERAGE		.323	MAXIMUM .817	MAXIMUM	84.1	2.4	97		68.5	4.6	93		4.9	2.6	45	
NO. OF SAMPLES					17	19			34	48			17	11		

TIMMINS (WHITNEY & TISDALE)

Project City of Timmins
(Porcupine/S. Porcupine WPCP)

PROJECT NO: 1-0109-67

DESIGN FLOW: 0.75 MIGD

TREATMENT: Contact Stabilization

DESIGN POPULATION: 7,500

DESIGN BOD: Raw Sewage 170 mg/l
SS : Raw Sewage 200 mg/l

PRETREATMENT

RAW SEWAGE PUMPS
Type: Variable-speed
Size: Two, each 1590 IGPM

GRIT REMOVAL
Type: manually cleaned channels
Two, each 36.5' x 2' x 0.7' awl
(319 I.G. each)
Retention: (each) 0.6 min.

COMMINUTION
Size: Motor 3/4 HP

BIOLOGICAL TREATMENT
Two EIMCO ENVIROTECH UNITS
(One described hereunder)

CONTACT TANK
Volume: 30264 I.G.
Retention: 1.9 hr

REAERATION TANK
Volume: 92,352 I.G.
Retention: 5.9 hr

CLARIFIER
Volume: 92,000 I.G.
Retention: 5.9 hr
Loading: surface 390 gal/ft^2/day

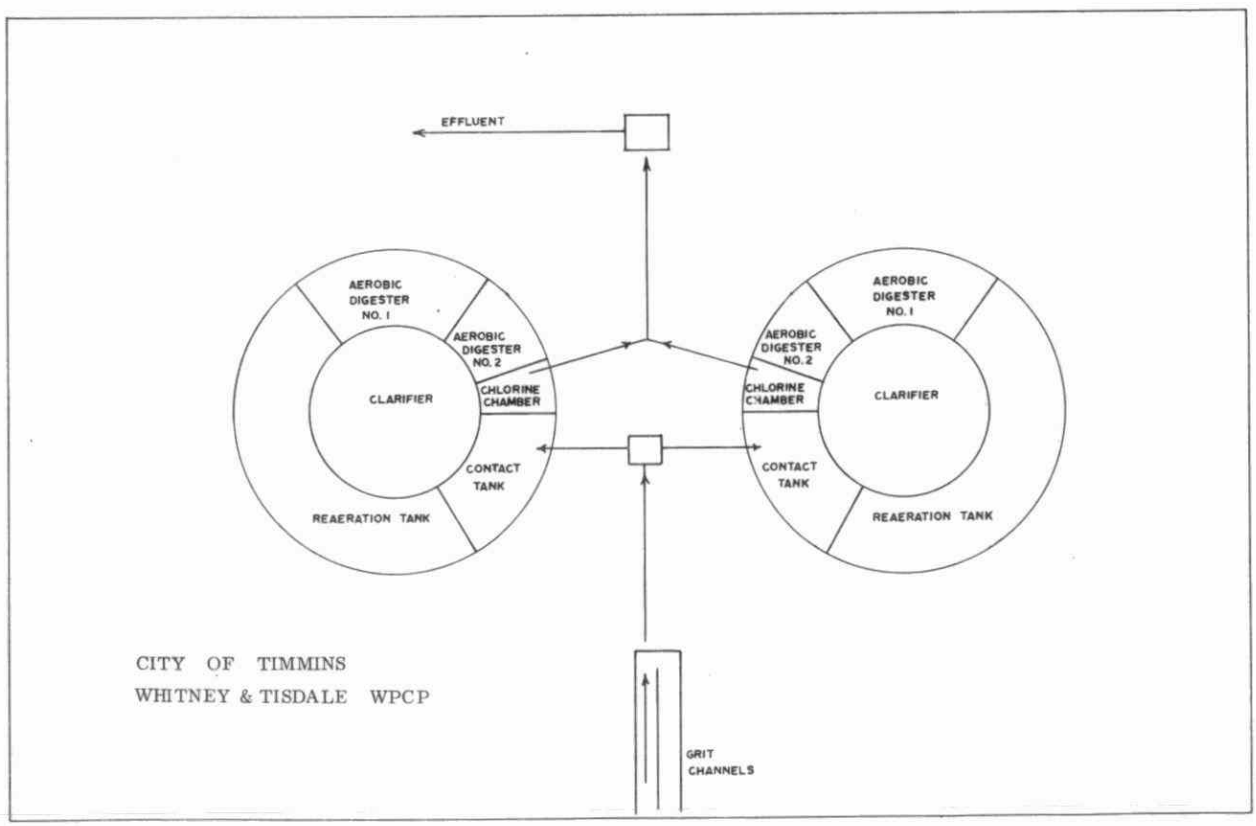
AEROBIC DIGESTER NO. 1
Volume: 38,000 I.G.

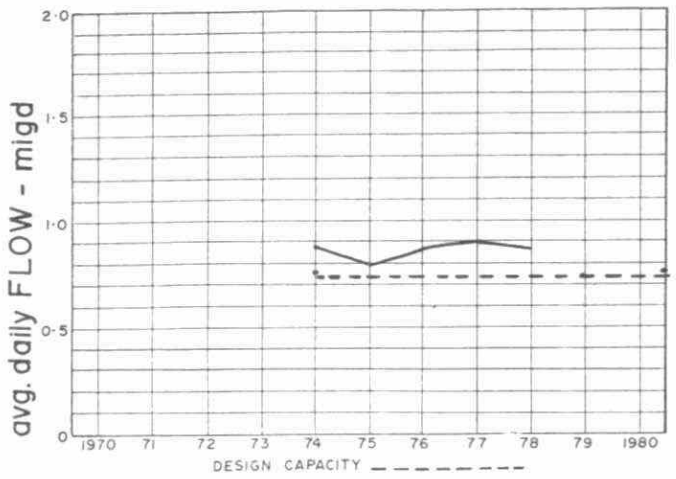
AEROBIC DIGESTER NO. 2
Volume: 18720 I.G.

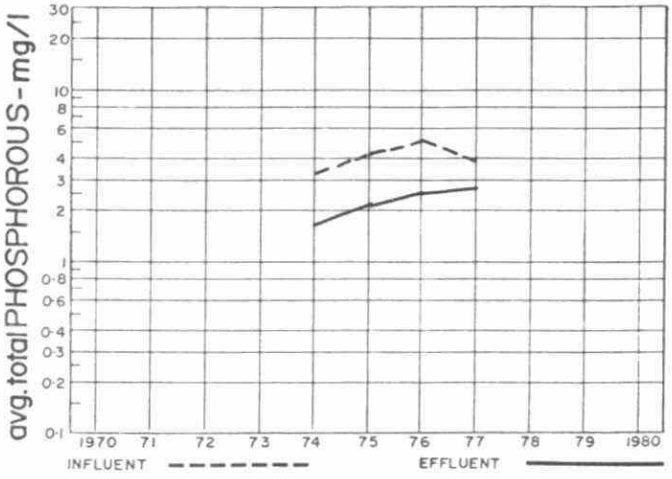
CHLORINATION
(common to both plants)

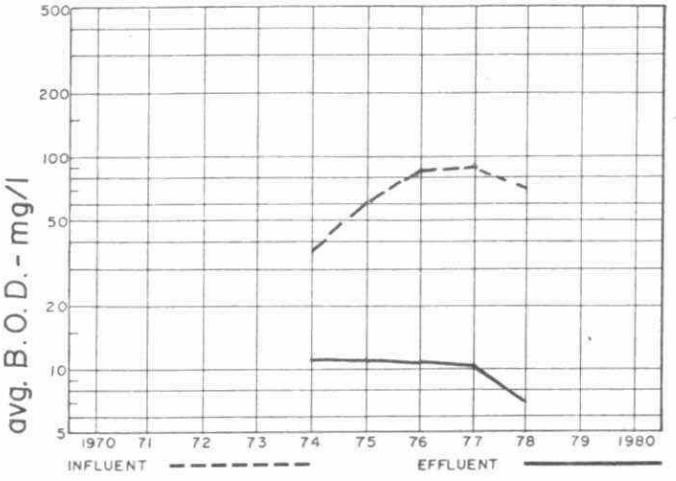
CHLORINE CONTACT CHAMBER
Volume: 8,700 I.G.
Retention: 33 min.

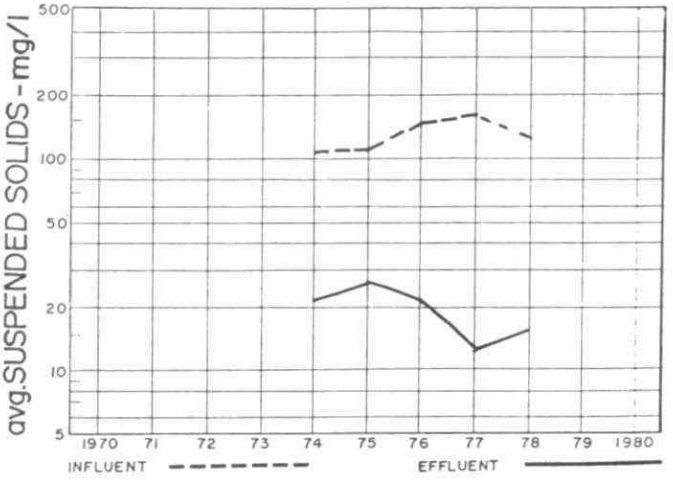
CHLORINATOR
Size: One, 100 lb/day max feed rate











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001391 — WHITNEY & TSDALE WPCP

MUNICIPALITY : TIMMINS WHITNEY TISDALE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 44,251

COMMENT: THIS PLANT CONSISTS OF TWO EQUAL PACKAGE SEWAGE TREATMENT WORKS

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.750 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	16.920	.546	.702	1.000					65.0	13.0	80	8.7	*	*		
FEB	14.890	.525	.680	1.100	30.0	23.0	23	1.0	76.0	15.0	80	9.0	*	*		
MAR	17.322	.559	.813	1.230					81.0	13.0	83	11.7	*	*		
APR	39.928	1.331	2.514	2.500	78.0	12.0	84	26.3	138.0	19.5	85	47.3	*	*		
MAY	50.516	1.630	2.707	2.500	46.0	7.5	83	19.4	66.0	15.0	77	25.7	*	*		
JUN	39.555	1.319	2.256	2.500	320.0	3.0	99	125.3	363.0	27.9	92	132.5	*	*		
JUL	32.207	1.038	1.671	2.500	24.0	4.0	83	6.4	215.0	30.8	85	59.3	*	*		
AUG	23.347	.753	1.532	2.250	28.0	2.7	90	5.8	90.0	14.9	83	17.5	*	*		
SEP	22.884	.762	.972	1.620	42.0	8.0	80	7.7	157.0	17.2	89	31.9	*	*		
OCT	29.142	.940	1.775	2.500	59.0	3.1	94	16.2	114.0	5.0	95	31.7	*	*		
NOV	21.107	.703	1.038	1.940	38.0	2.0	94	7.5	36.0	15.0	58	4.4	*	*		
DEC	18.102	.583	.698	1.010	60.0	10.0	83	9.0	153.0	12.1	92	25.5	*	*		
TOTAL	325.920							224.6				405.2				
AVERAGE		.891	MAXIMUM 2.707	MAXIMUM 2.500	72.5	7.5	89		129.5	16.5	87					
NO. OF SAMPLES					14	20			50	47						

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110004058 — WHITNEY TISDALE WPCP (PLANT "A")

MUNICIPALITY : TIMMINS WHITNEY TISDALE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 44,251

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.375 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->								
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN					*				*							
FEB					*				*							
MAR					*				*							
APR					13.0				23.0							
MAY					6.5				13.0							
JUN					3.0				28.5							
JUL					6.0				33.6							
AUG					1.4				20.5							
SEP					6.5				13.4							
OCT					4.0				5.0							
NOV					2.0				12.0							
DEC					6.0				11.0							
TOTAL																
AVERAGE		MAXIMUM	MAXIMUM		5.3				17.7							
NO. OF SAMPLES					13				33							

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110004067 — WHITNEY TISDALE WPCP (PLANT "B")

MUNICIPALITY : TIMMINS WHITNEY TISDALE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 44,251
POPULATION SERVED :
PERCENT SERVED :

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

* NO DATA AVAILABLE

DESIGN CAPACITY : 0.375 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->								
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN					*				*							
FEB					*				*							
MAR					*				*							
APR					11.0				16.0							
MAY					8.5				17.0							
JUN					3.0				27.2							
JUL					2.0				28.1							
AUG					4.1				9.2							
SEP					9.5				21.0							
OCT					2.2				5.0							
NOV					2.0				18.0							
DEC					14.0				13.3							
TOTAL																
AVERAGE		MAXIMUM	MAXIMUM		6.2				17.2							
NO. OF SAMPLES					13				29							

Ministry of the Environment
Ontario

Northwestern Region
⑥

REGIONAL OFFICE
THUNDER BAY
435 James St. S.
P.O. Box 5000
807-475-1205

DISTRICT OFFICE
Kenora
808 Robertson St.
807-468-5578

James Bay
KENORA
THUNDER BAY
Lake Superior

EAR FALLS

Project Ear Falls Twp WPCP
Project No. 1-0061-67

Design Flow 0.4 MIGD
Design BOD 280 mg/l
Design SS 310 mg/l

LIFT STATION:
Pumps: 2 Type: FLYGT Star Delta
Size: 1750 rpm

GRIT CHANNELS:
2, 1.6' w x 15.0'1 x 1.8' swd equipped with bar screens
Volume (each) 270 J.G. Detention (each) 3 min.

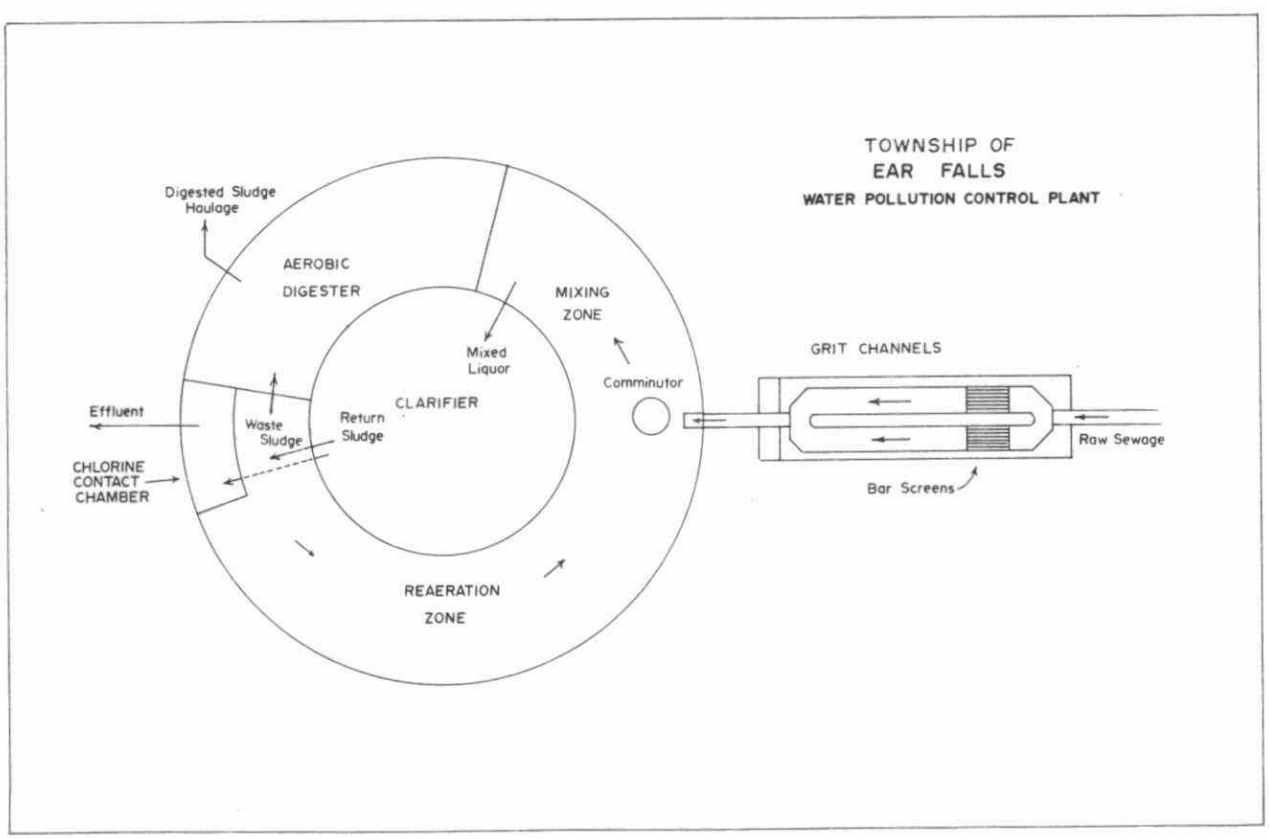
OXIGEST PLANT
(Smith & Loveless)

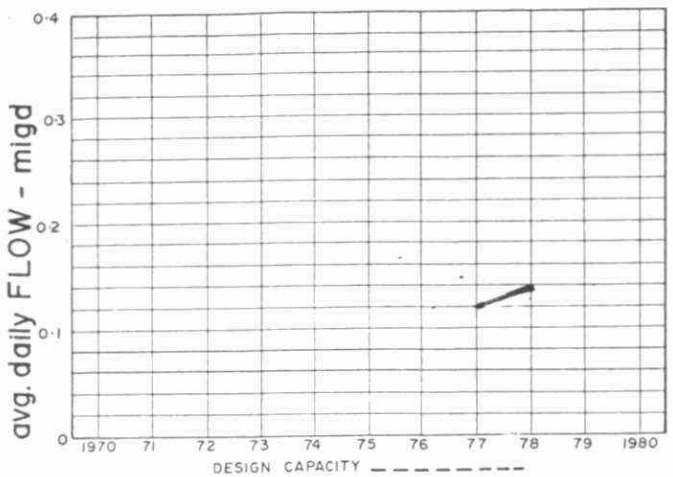
AERATION TANK:
(Mixing and Reaeration zones)
19.65' w x 15.25' swd x 262° arc
Volume: 58,200 I.G. Detention 10.0 hours
Comminutor: Type: HELIGEAR Size: 1725 rpm, ¼ HP
Blowers: 3 type ROOTS-CONNERSVILLE
Size: 925 rpm 15 HP 275 cfmct 7 psi

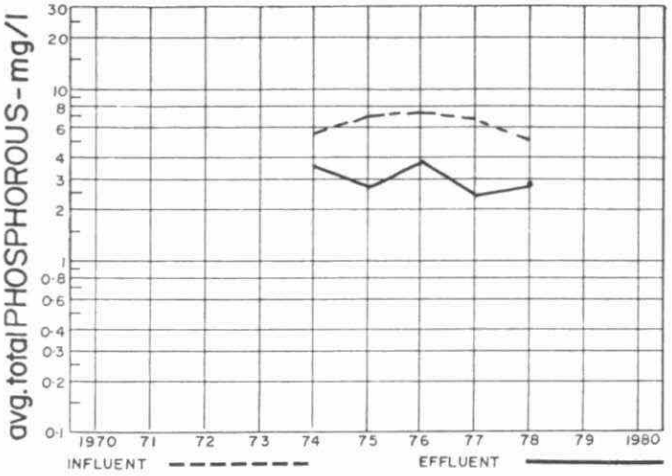
CLARIFIER:
19.25' i.d. x 12.8' swd
Volume 28,000 I.G. Detention 4.8 hours

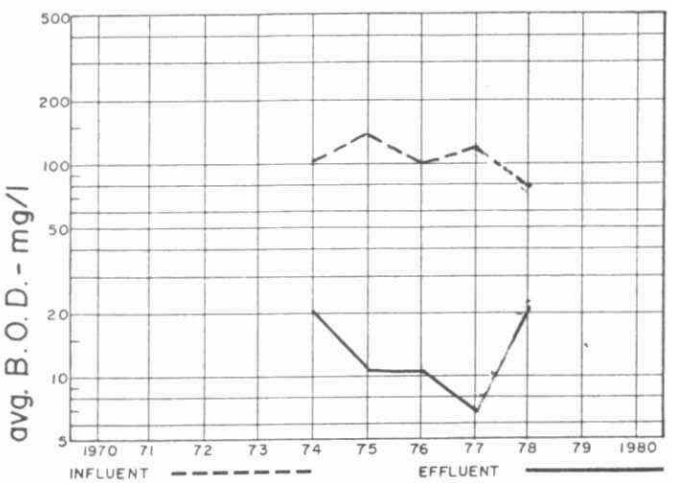
AEROBIC DIGESTER:
19.65' w x 15.25' swd x 98° arc
Volume 23,800 I.G. Detention 4.1 hours

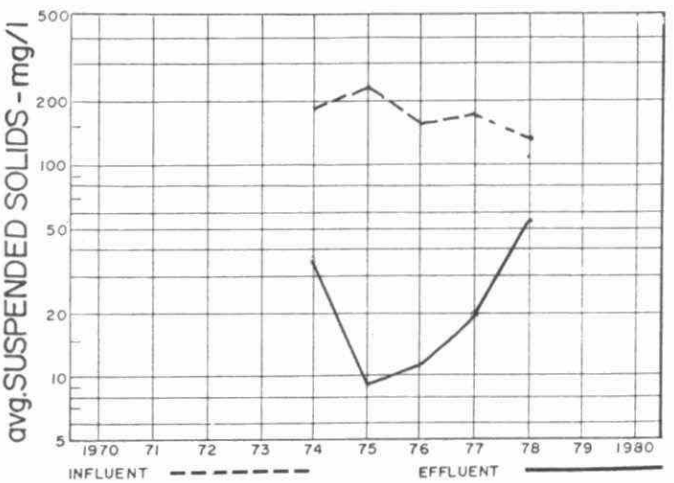
CHLORINE CONTACT CHAMBER:
3.5w x 15.25' swd x 30° arc
Volume 3350 I.G. Detention 34 minutes
Chlorinator: Type: Wallace & Tiernan
Size: 20 gpm











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001006 — EAR FALLS W P C P

MUNICIPALITY : EAR FALLS
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
CONVERT TO OTHER OPERATING MODE

CURRENT POPULATION : 2,036

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.400 MIGD — DESIGN BOD5 : 280.0 MG/L — DESIGN SUSP.SOLIDS : 310.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.478	.112	.128		130.0	7.0	94	4.2	150.0	5.0	96	5.0	5.0	1.1	78	.1
FEB	3.477	.124	.155		90.0	10.0	88	2.7	170.0	5.0	97	5.7	6.6	1.8	72	.1
MAR	3.421	.110	.141		85.0	50.0	41	1.1	190.0	110.0	42	2.7	7.7	5.2	32	
APR	4.264	.142	.252	.510	80.0	60.0	25	.8	110.0	320.0	-	-	5.5	.8	85	.2
MAY	4.330	.140	.207	.400	46.0	6.0	86	1.7	80.0	20.0	75	2.5	3.9	.5	87	.1
JUN	4.222	.136	.205	.550	55.0	11.0	80	1.8	130.0	10.0	92	5.0	4.4	.6	86	.1
JUL	4.475	.144	.191	.570	70.0	55.0	21	.6	110.0	160.0	-	-	3.6	3.2	11	
AUG	3.111	.100	.135	.550	85.0	29.0	65	1.7	160.0	30.0	81	4.0	5.8	8.4	-	-
SEP	4.170	.139			85.0	11.0	87	3.0	115.0	10.0	91	4.3	4.6	2.5	45	
OCT	3.534	.114			90.0	2.8	96	3.0	100.0	2.0	98	3.4	6.4	3.5	45	.1
NOV	4.170	.139			60.0	2.8	95	2.3	95.0	2.5	97	3.8	5.0	4.7	6	
DEC	7.967	.257			75.0	3.0	96	5.7	140.0	5.0	96	10.7	5.6	2.6	53	.2
TOTAL	50.619							28.6				47.1				.9
AVERAGE		.138	MAXIMUM .252	MAXIMUM .570	79.2	20.6	73		129.1	56.6	56		5.3	2.9	45	
NO. OF SAMPLES					12	12			12	12			12	12		

GERALDTON

PROJECT TOWN OF GERALDTON

PROJECT NO. 1-0041-66
TREATMENT Extended aeration
DESIGN FLOW 0.4 MGD

BOD - 230 mg/l

PRETREATMENT

Grit Removal

Type: Grit channels
Size: Twin 25' X 2' x 0.72'deep

SECONDARY TREATMENT

Aeration Tank

Volume: 11,346 gal.
Loading: 918 lb. BOD/day

Clarifier

Surface Area: 1320 $ft.^2$
Overflow Rate: 300 $gal./ft^2/day$

SLUDGE HANDLING

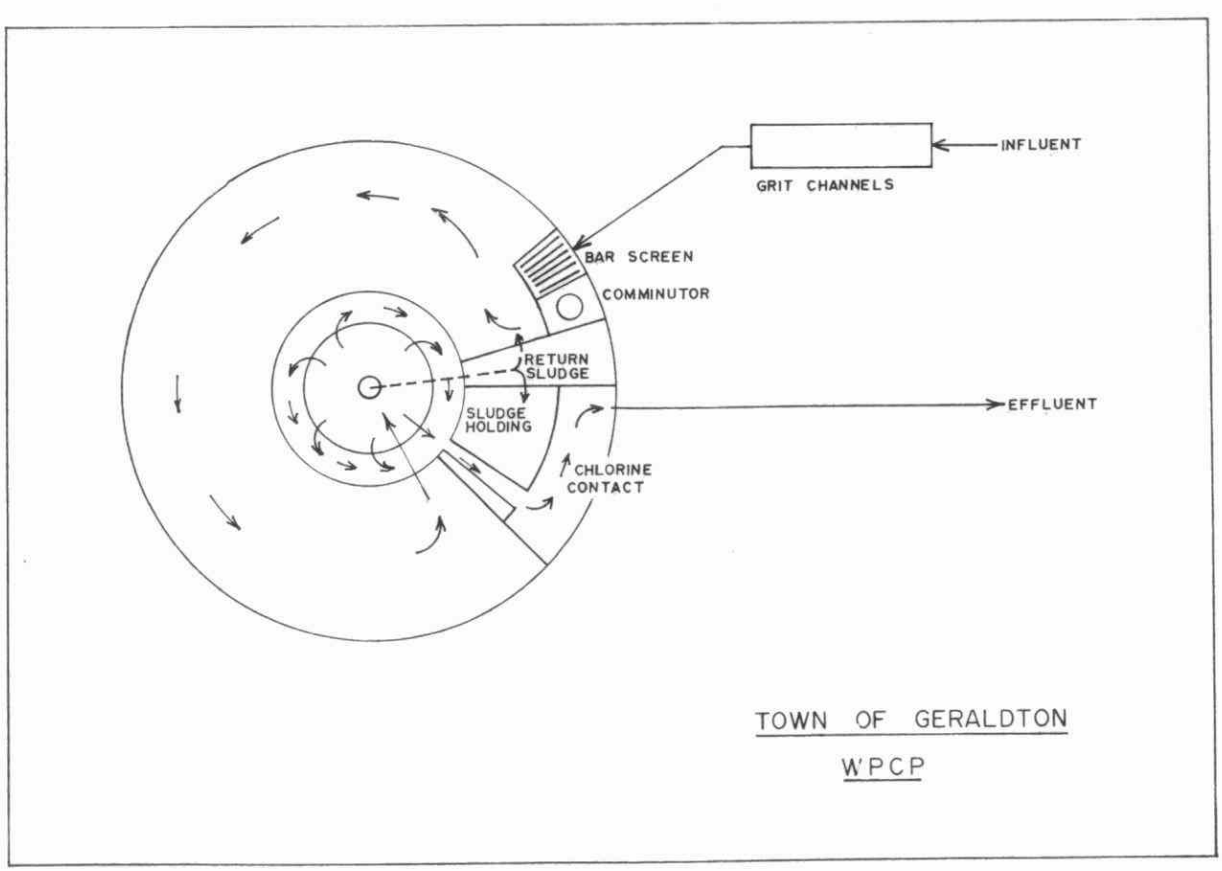
Holding Tank

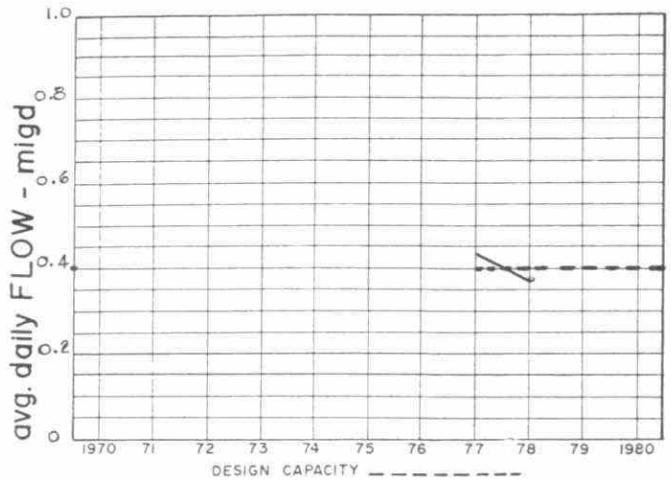
Volume: 2000 $ft.^3$

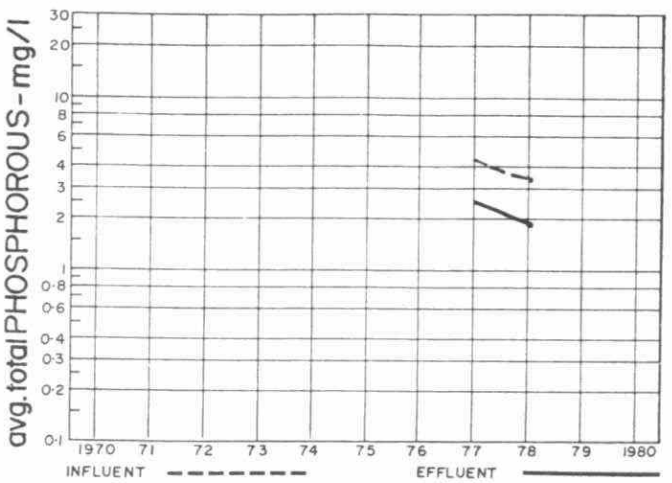
CHLORINATION

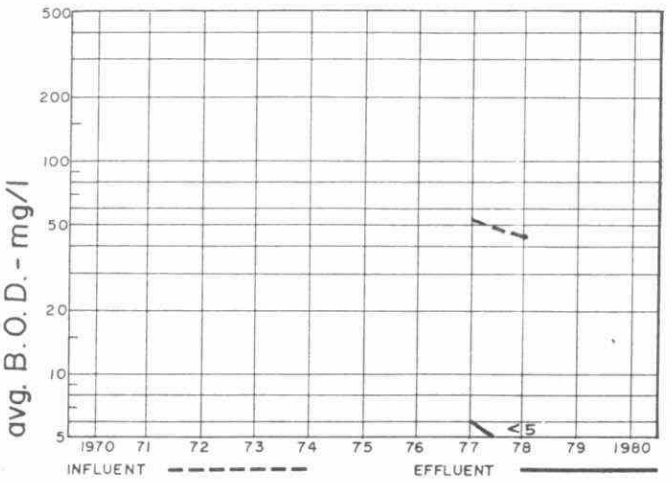
Chlorination Contact Chamber

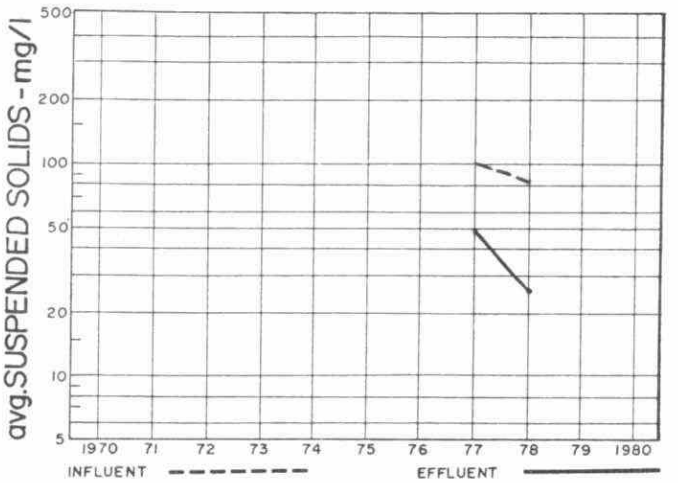
Volume: 1110 $ft.^3$
Retention: 30 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001649 — GERALDTON W P C P

MUNICIPALITY : GERALDTON
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
CONVERT TO OTHER OPERATING MODE

CURRENT POPULATION : 3,010

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.400 MIGD — DESIGN BOD5 : 230.0 MG/L — DESIGN SUSP.SOLIDS : MG/L

<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.675	.248	.294		75.0	4.0	94	5.4	78.0	20.0	74	4.4	5.3	2.8	47	.1
FEB	7.114	.254	.296		*	*			*	*			*	*		
MAR	8.243	.266	.311		30.0	2.0	93	2.3	50.0	10.0	80	3.2	2.7	2.1	22	
APR	17.328	.578	1.200		23.0	3.0	86	3.4	80.0	45.0	43	6.0	3.3	1.9	42	.2
MAY	18.036	.582	1.118		42.0	3.6	91	6.9	95.0	62.0	34	5.9	3.8	1.9	50	.3
JUN	19.312	.643	1.410		40.0	2.6	93	7.2	80.0	28.0	65	10.0	2.3	1.8	21	
JUL	10.855	.350	.578		44.0	2.0	95	4.5	62.0	25.0	59	4.0	3.2	1.5	53	.1
AUG	10.101	.325	.418		30.0	2.2	92	2.8	60.0	10.0	83	5.0	2.6	1.8	30	
SEP	10.008	.333	.402		38.0	1.0	97	3.7	50.0	10.0	80	4.0	2.7	*		
OCT	9.461	.305	.397		52.0	1.1	97	4.8	70.0	3.0	95	6.3	4.3	1.6	62	.2
NOV	7.971	.265	.351		50.0	.4	99	3.9	170.0	15.0	91	12.3	4.7	*		
DEC	7.729	.249	.344		90.0	.8	99	6.8	110.0	70.0	36	3.0	5.1	2.0	60	.2
TOTAL	133.833							51.7				64.1				1.1
AVERAGE		.367	MAXIMUM 1.410	MAXIMUM	46.7	2.0	95		82.2	27.0	67		3.6	1.9	46	
NO. OF SAMPLES					16	17			16	17			16	15		

IGNACE

Project: Ignace Twp. WPCP

Project No:	1-0060-67
Design Flow:	0.21 MIGD Contact Stabilization
	0.55 MIGD Extended Aeration
Design Population:	2500
BOD:	Raw Sewage - 285 lb/day

PRETREATMENT

PUMPING STATION:
Pumps: Two, Type: FLYGT CP3151
Size: 670 USGPM at 59' TDH

Bar Screen at pumping station inlet

GRIT CHANNELS:
Two, 25' x 2' x 2' swd
Volume: (each) 624 I. Gal.
Detention: (each) 4.2 min.

BIOLOGICAL TREATMENT (Extended Aeration)

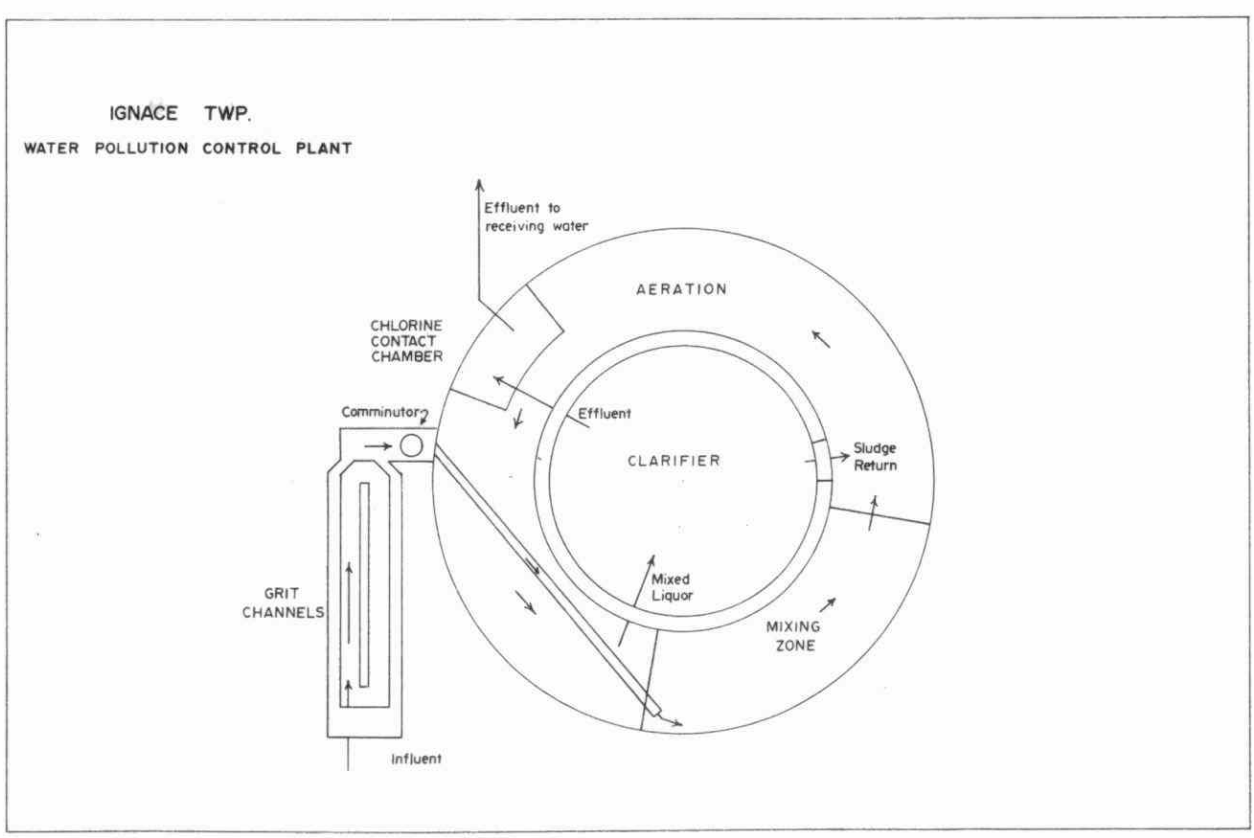
MIXING ZONE:
Volume: 26,000 I. Gal. Detention: 3.0 hours

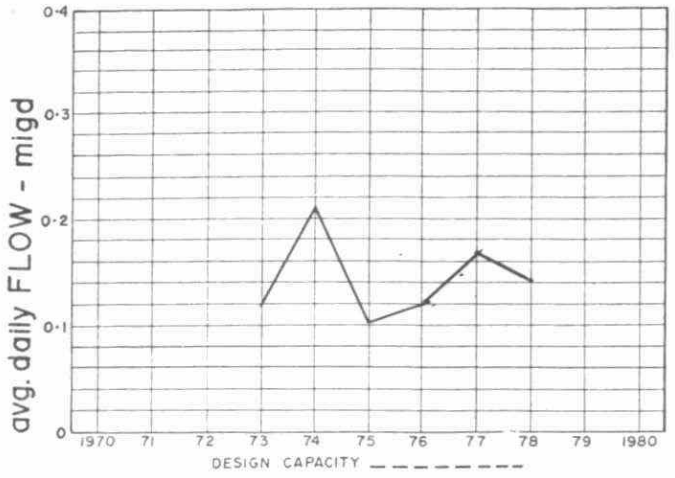
AERATION ZONE:
Volume: 113,000 I. Gal.

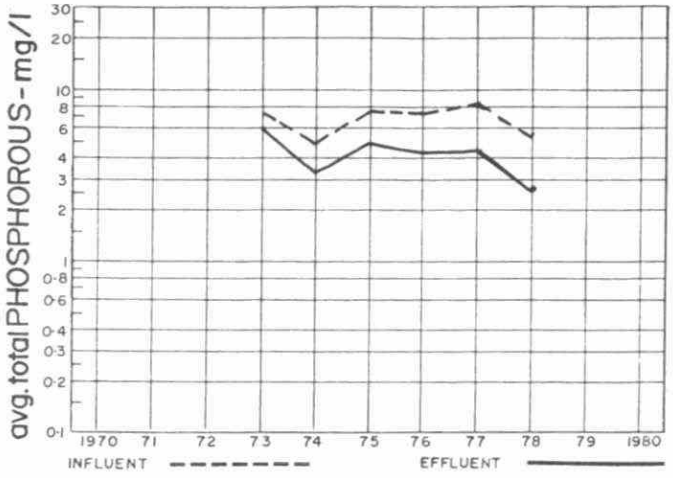
Blowers, Two, Type: Roots Connersville RA188
Size: 590 cfm

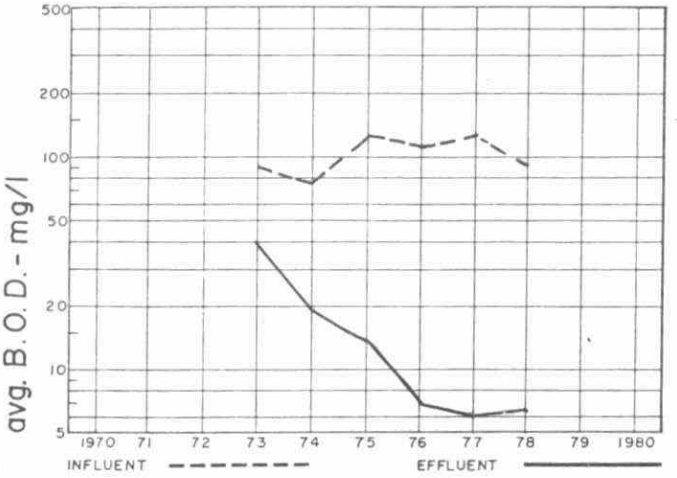
SETTLING ZONE:
23'2" dia. x 12.6" awd
Volume: 37,000 I. Gal. Detention: 4.2 hours
Overflow Rate: 500 I. Gal/ft^2/day

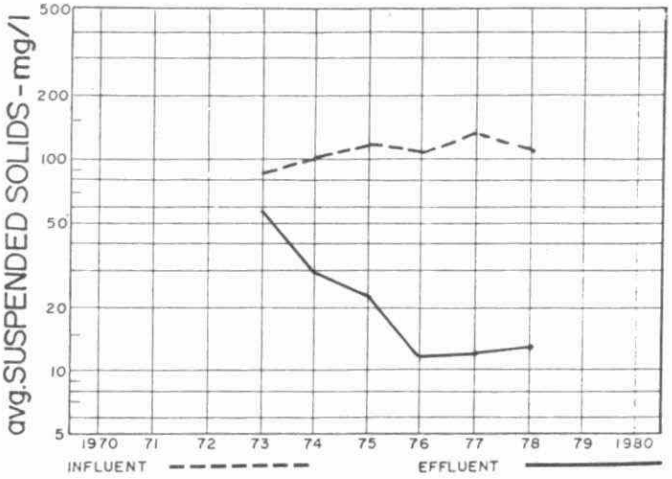
CHLORINE CONTACT ZONE:
Volume: 4300 I. Gal. Detention: 29 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001355 — IGNACE W P C P

MUNICIPALITY : IGNACE
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
CONVERT TO OTHER OPERATING MODE

CURRENT POPULATION : 2,131

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.550 MIGD — DESIGN BOD5 : 285.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.351	.237	.353		80.0	3.0	96	5.6	103.0	13.0	87	6.6	5.2	2.8	46	.1
FEB	6.738	.171	.244		*	*			*	*			*	*		
MAR	6.606	.174	.267		52.0	5.0	90	3.1	70.0	6.5	90	4.1	2.6	3.0	-	-
APR	6.728	.178	.652		*	*			*	*			*	*		
MAY	6.625	.214	.758		120.0	8.5	92	7.3	185.0	8.3	95	11.7	8.3	4.7	43	.2
JUN	5.594	.074	.629		98.0	9.8	90	4.9	103.0	10.0	90	5.2	7.4	2.0	72	.3
JUL	5.443	.098	.219		99.0	6.3	93	5.0	135.0	11.0	91	6.7	5.7	1.0	82	.2
AUG	5.026	.081	.216		78.0	4.7	93	3.6	102.0	11.3	88	4.5	6.4	4.1	35	.1
SEP	4.440	.071	.100		80.0	2.6	96	3.4	88.0	8.0	90	3.5	6.0	*		
OCT	2.491	.080	.168		140.0	3.8	97	3.3	143.0	16.0	88	3.1	6.5	1.3	80	.1
NOV	3.655	.122	.287		99.0	5.6	94	3.4	115.0	31.9	72	3.0	6.9	2.1	69	.1
DEC	6.877	.222	.669		72.0	14.7	79	3.9	72.0	28.2	60	3.0	4.3	4.0	6	
TOTAL	67.574							43.5				51.4				1.1
AVERAGE		.144	MAXIMUM .758	MAXIMUM	91.8	6.4	93		111.6	14.4	87		5.9	2.7	53	
NO. OF SAMPLES					28	52			30	56			31	54		

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110004076 — IGNACE WPCP "A" — 110001355

MUNICIPALITY : IGNACE (PLANT A)
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 2,131

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.550 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN		.119				3.0				13.0				1.6		
FEB		.086														
MAR		.087				6.0				5.0				2.6		
APR																
MAY																
JUN																
JUL																
AUG																
SEP																
OCT																
NOV																
DEC																
TOTAL																
AVERAGE		.097	MAXIMUM	MAXIMUM		4.5				9.0				2.1		
NO. OF SAMPLES						4				4				4		

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110004085 — IGNACE WPCP "B" — 110001355

MUNICIPALITY : IGNACE (PLANT B)
REGION : 06 NORTHWESTERN

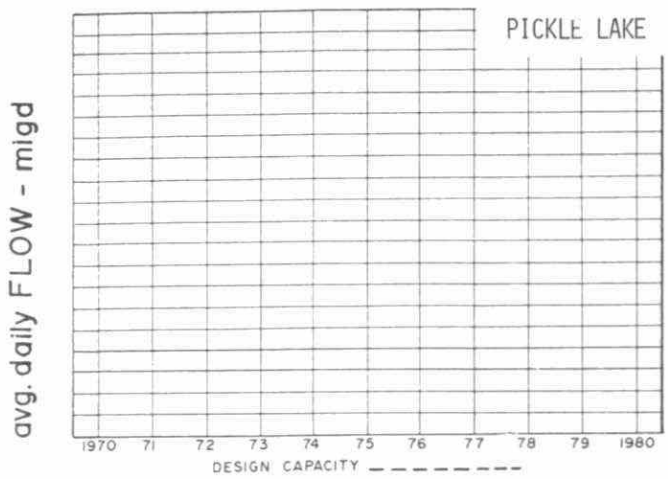
TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

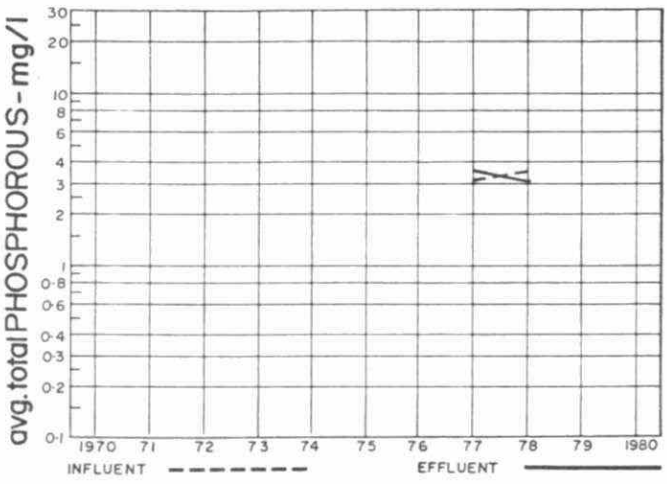
CURRENT POPULATION : 2,131

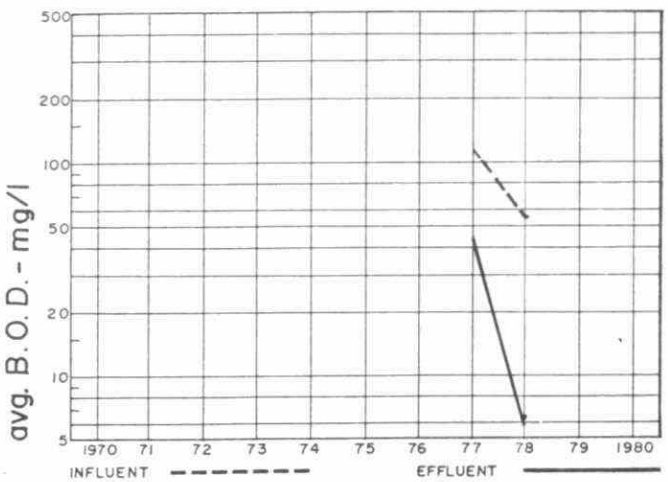
OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

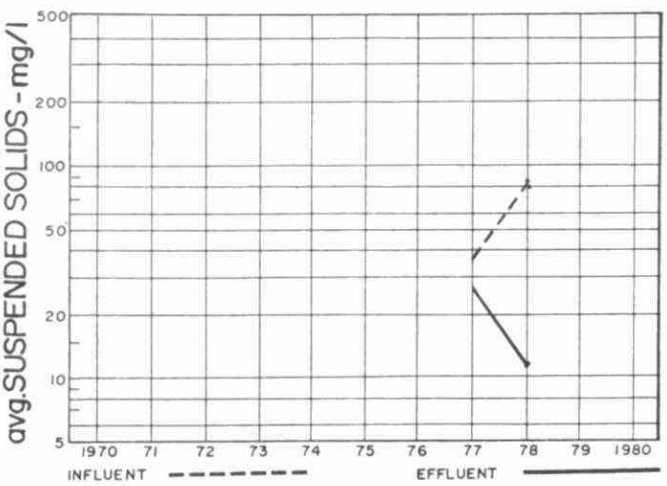
DESIGN CAPACITY : 0.550 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN		.119				3.0				13.0				4.0		
FEB		.086														
MAR		.087				4.0				8.0				3.4		
APR																
MAY																
JUN																
JUL																
AUG																
SEP																
OCT																
NOV																
DEC																
TOTAL																
AVERAGE		.097	MAXIMUM	MAXIMUM		3.5				10.5				3.7		
NO. OF SAMPLES						2				2				4		









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002185 — PICKLE LAKE WPCP

MUNICIPALITY : PICKLE LAKE
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

* NO DATA AVAILABLE

CURRENT POPULATION : 744

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD — DESIGN BOD5 : * MG/L — DESIGN SUSP.SOLIDS : * MG/L

<--- * FLOW DATA					---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	*	*	*		4.0	13.0	-		55.0	30.0	45		3.3	3.8	-	
FEB	*	*			7.0	13.0	-		25.0	5.0	80		1.2	3.6	-	
MAR	*	*			25.0	10.0	60		38.0	17.0	55		1.9	2.7	-	
APR	*	*			45.0	5.0	88		113.0	15.0	86		2.5	2.9	-	
MAY	*	*			29.0	6.5	77		40.0	5.0	87		2.8	3.9	-	
JUN	*	*			55.0	2.7	95		65.0	20.0	69		4.1	5.1	-	
JUL	*	*			51.0	3.5	93		68.0	15.0	77		3.4	3.7	-	
AUG	*	*			46.0	3.8	91		73.0	4.0	94		2.9	2.6	10	
SEP	*	*			280.0	5.4	98		390.0	4.0	98		9.3	1.4	84	
OCT	*	*			45.0	5.8	87		63.0	16.5	73		3.3	3.3		
NOV	*	*			42.0	3.2	92		57.0	5.0	91		2.8	2.9	-	
DEC	*	*			58.0	2.9	95		55.0	10.0	81		2.4	2.9	-	
TOTAL																
AVERAGE			MAXIMUM	MAXIMUM	57.2	6.2	89		86.8	12.2	85		3.3	3.2	2	
NO. OF SAMPLES					24	25			24	25			24	25		

SCHREIBER

PROJECT Municipality of Schreiber

PROJECT NO. 1-0072-67
TREATMENT

BOD Raw Sewage 450 mg/l
SS Raw Sewage 240 mg/l

PRETREATMENT

Grit Channels

Twin

SECONDARY TREATMENT

Aeration Tanks

Contact Volumes: 3333 ft^3 = 20,800 gal.
Reaeration Volume: 7792 ft^3 = 48,600 gal.
Loading: 40 lb. BOD/1000 $ft.^3$
Contact Retention: 2 hr.
Reaeration Retention: 4.67 hr.
Total Area: 741 $ft.^2$

Air Supply

Total: 1000 cfm
No. of blowers: 2
Each blower provides 932 cfm @ 845 r.p.m.
using a 50 hp. motor

Secondary Sedimentation

Area: 727 $ft.^2$
Volume: 8760 $ft.^3$ = 54,600 gal.
Loading: surface, 344 gal./$ft.^2$/day
Retention: 5.25 hr.

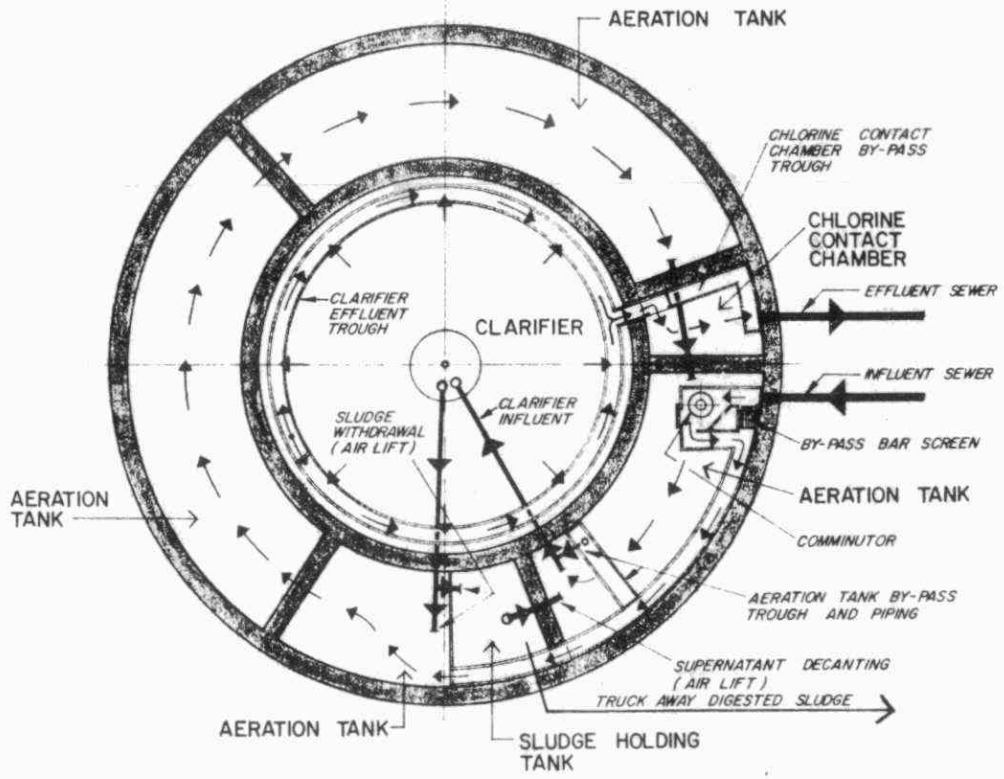
SLUDGE HANDLING

Volume, Digester #1: 5300 $ft.^3$
Volume, Digester #2: 2700 $ft.^3$
Surface area (Total): 533 $ft.^2$
Loading: 3.2 $ft.^3$/ capita
Air Supply: 400 cfm

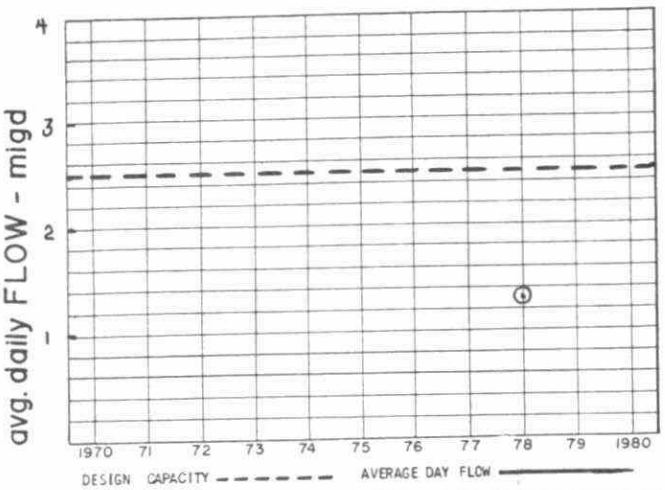
CHLORINATION

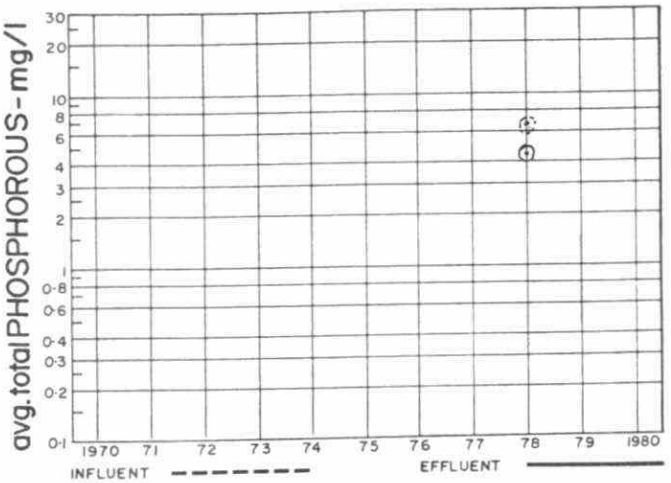
Chlorination Contact Chamber

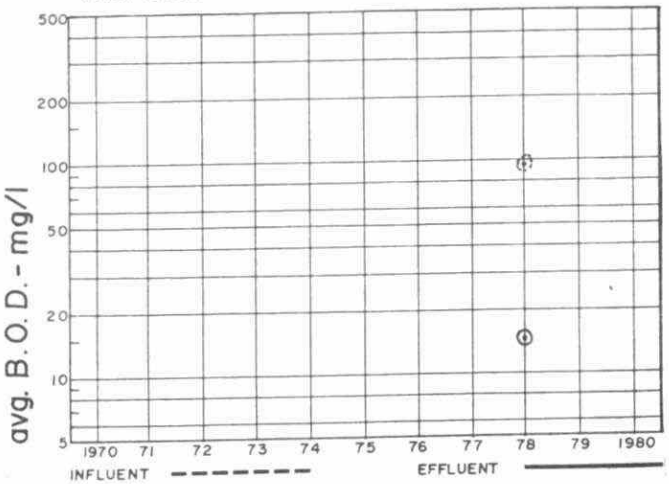
Volume: 5200 gal.
Detention: 30 min.

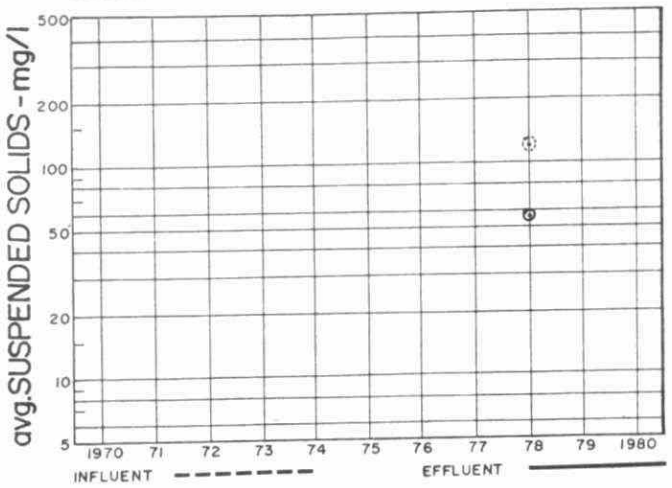


EXTENDED AERATION









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002112 SCHREIBER W P C P

MUNICIPALITY : SCHREIBER
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 1,986

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.250 MIGD DESIGN BOD5 : 450.0 MG/L DESIGN SUSP.SOLIDS : 240.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.496	.113	.157		100.0	15.0	85	2.9	120.0	35.0	70	2.9	7.2	4.1	43	.1
FEB	4.488	.160	.270		120.0	20.0	83	4.4	*	50.0			7.8	3.2	58	.2
MAR	6.155	.199	.272		60.0	21.0	65	2.4	110.0	70.0	36	2.4	4.4	2.9	34	
APR	5.424	.181	.305		60.0	11.0	81	2.6	95.0	40.0	57	2.9	4.5	2.9	35	
MAY	*	*			*	*			*	*			*	*		
JUN	2.211	.074	.108		92.0	*			99.0	*			*	*		
JUL	1.822	.058	.082		90.0	16.0	82	1.3	130.0	45.0	65	1.5	6.1	6.1		
AUG	2.319	.075	.120		70.0	14.0	80	1.2	100.0	170.0	-	-	4.8	5.8	-	-
SEP	2.401	.080	.099		180.0	7.5	95	4.1	120.0	20.0	83	2.4	8.4	4.2	50	.1
OCT	4.940	.159	.189		84.0	12.0	85	3.5	120.0	35.0	70	4.1	8.5	5.7	32	.1
NOV	4.730	.158	.197		100.0	11.0	89	4.2	140.0	45.0	67	4.4	7.6	4.7	38	.1
DEC	5.625	.181	.237		*	*			*	*			*	*		
TOTAL	43.611							26.6				20.6				.6
AVERAGE		.131	MAXIMUM .305	MAXIMUM	95.6	14.1	85		114.8	56.6	50		6.5	4.4	33	
NO. OF SAMPLES					10	9			9	9			9	9		

CONTACT STABILIZATION PLANTS

Ministry of the Environment
Ontario

Central Region

(3)

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386

Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

PORT McNICOLL

PROJECT Village of Port McNicoll WPCP

PROJECT NO. 1-0091-67

TREATMENT Contact Stabilization

DESIGN FLOW 0.23 MGD

BOD - Raw Sewage - 170 mg/l

SS - Raw Sewage - 200 mg/l

PRETREATMENT

RAW SEWAGE PUMPS
Two, Type: PACIFIC
Size: each 280 igpm

GRIT CHANNELS
Two, each 12' x 1' x 1.25 awl
Volume: (each) 94 gal. Detention: 0.6 min.

BIOLOGICAL TREATMENT

CLARIFIER
29' dia. x 12.25' awl
Volume: 50,500 I. Gal.
Detention: 5.2 hr.
Overflow Rate: 348 I. Gal. /ft^2/day

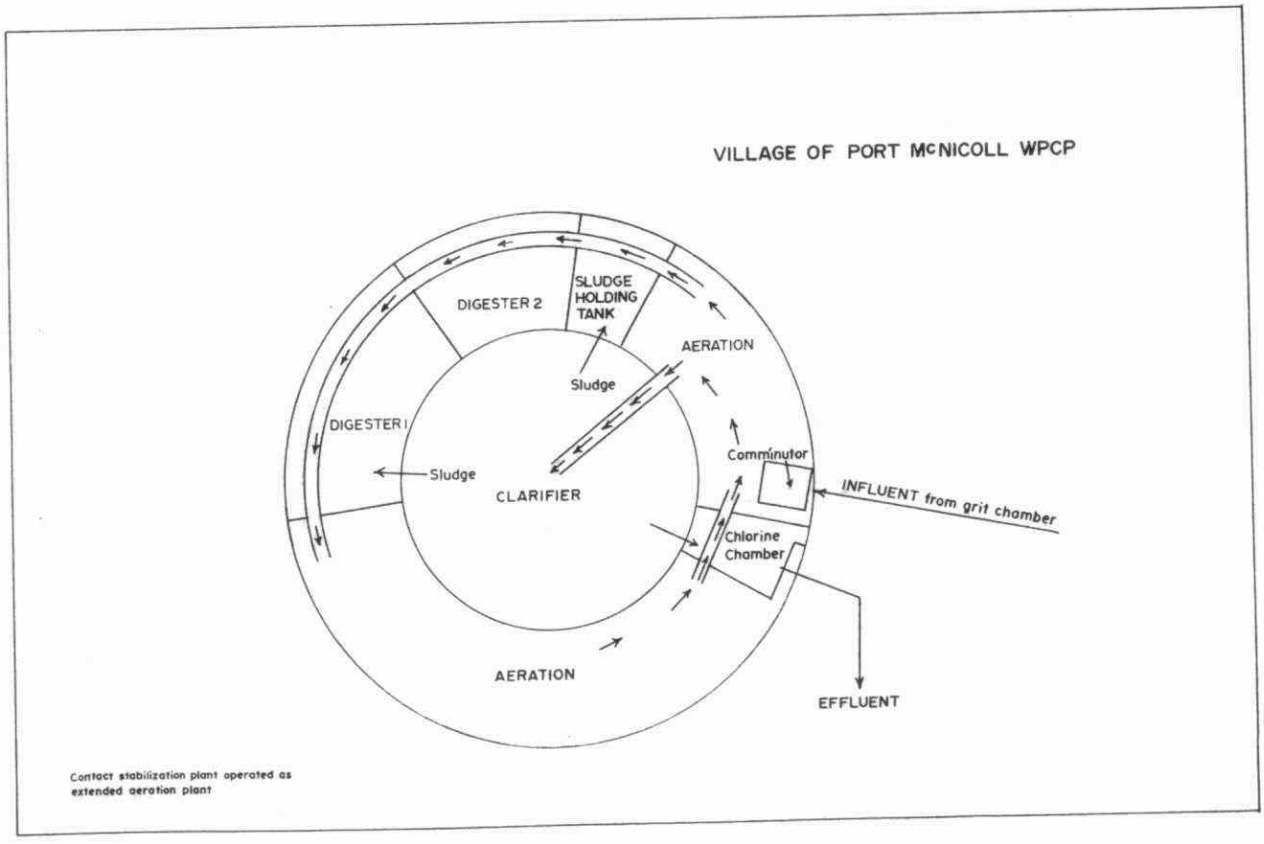
AERATION TANK
Volume: 87,800 I. Gal.
Detention: 9.2 hr.
Blowers: Three CORD CA-59
Size: 600 cfm at 15 psi

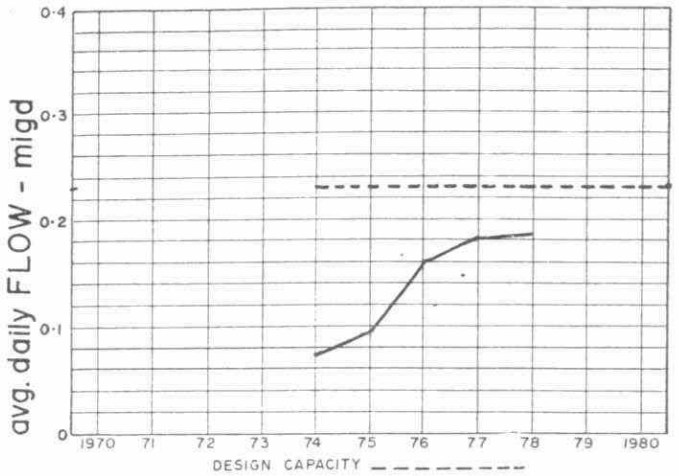
AEROBIC DIGESTER 1
Volume: 26,000 I. Gal.

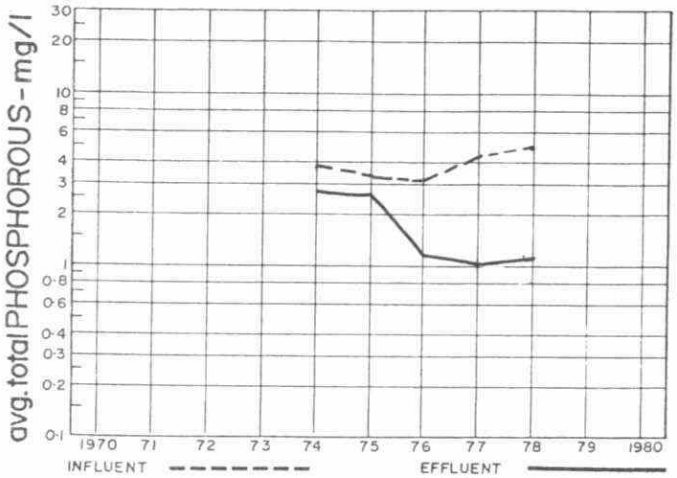
AEROBIC DIGESTER 2
Volume: 17,000 I. Gal.

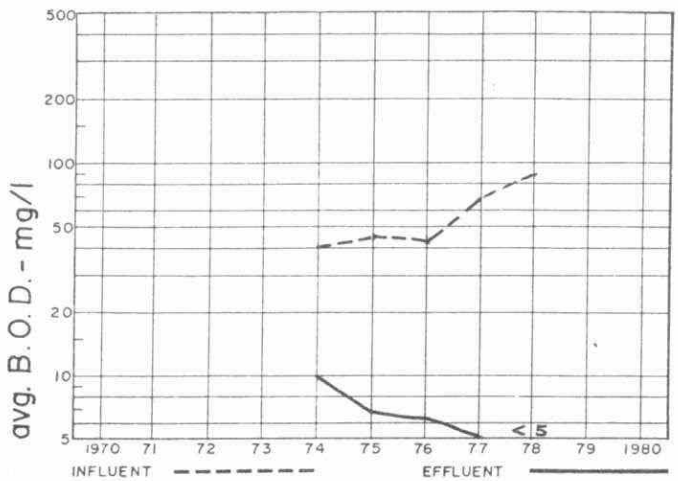
CHLORINE CHAMBER
Volume: 6750 I. Gal.
Detention: 42 min.

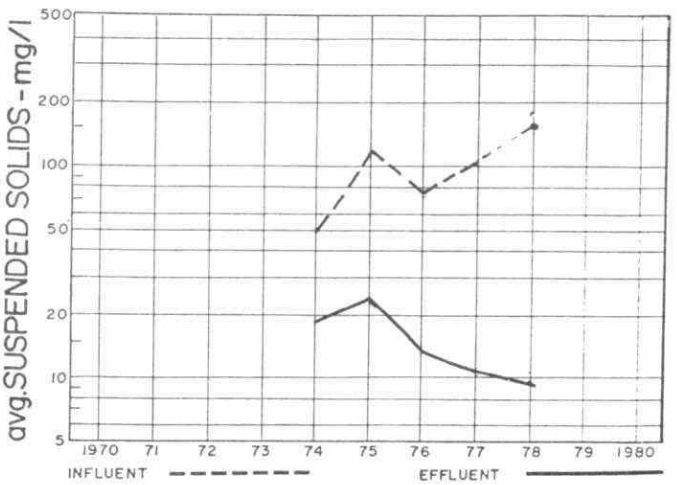
SLUDGE HOLDING TANK
Volume: 9,000 I. Gal.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001417 — PORT MC NICOLL WPCP

MUNICIPALITY : PORT MC NICOLL
REGION : 03 CENTRAL

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,956

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.230 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	6.583	.212	.234		80.0	4.0	95	5.0	98.0	11.0	88	5.7	4.6	.8	82	.2
FEB	5.271	.188	.212		130.0	3.0	97	6.6	225.0	9.0	96	11.3	5.9	.8	86	.2
MAR	7.212	.233	.355		110.0	5.0	95	7.5	170.0	10.0	94	11.5	6.0	.9	85	.3
APR	11.266	.375	.460		42.0	4.0	90	4.2	250.0	14.0	94	26.5	1.8	.9	50	.1
MAY	7.750	.250	.334		40.0	5.0	87	2.7	68.0	10.0	85	4.4	3.6	.8	77	.2
JUN	5.329	.177	.300		85.0	2.0	97	4.4	110.0	7.0	93	5.4	5.2	.8	84	.2
JUL	3.794	.122	.147		110.0	3.0	97	4.0	225.0	15.0	93	7.9	7.7	1.7	77	.2
AUG	3.508	.113	.133		78.0	4.5	94	2.5	135.0	6.0	95	4.5	4.2	1.8	57	
SEP	4.232	.141	.181		130.0	1.0	99	5.4	260.0	5.0	98	10.7	8.8	1.7	80	.3
OCT	6.005	.194	.273		60.0	6.0	90	3.2	100.0	11.0	89	5.3	3.4	1.3	61	.1
NOV	5.819	.194	.254		120.0	4.5	96	6.7	100.0	7.0	93	5.4	5.6	1.1	80	.2
DEC	7.113	.229	.298		52.0	6.0	88	3.2	65.0	10.0	84	3.9	3.5	.8	77	.1
TOTAL	73.882							55.4				102.5				2.1
AVERAGE		.202	MAXIMUM .460	MAXIMUM	86.4	4.0	95		150.5	9.5	93		5.0	1.1	77	
NO. OF SAMPLES					12	12			12	12			12	12		

Ministry of the Environment
Ontario

Southeastern Region
④

REGIONAL OFFICE

KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES

Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

PEMBROKE
OTTAWA
CORNWALL
KINGSTON
BELLEVILLE
Lake Ontario

FRANKFORD

PROJECT VILLAGE OF FRANKFORD

PROJECT NO. 1-0132-67
TREATMENT
DESIGN FLOW 0.3 mgd
DESIGN POPULATION 3000

BOD Loading: 170 mg/l

SS Loading: 200 mg/l

PUMPING STATIONS

No.1 -2 submersible pumps (1 standby) @ 250 Igpm and 9 hp. each.

No.2 -2 submersible pumps (1 standby) @ 85 Igpm and 2½ hp. each.

No.3 -2 submersible pumps @ 200 Igpm and 7½ hp. each.

PRETREATMENT

Grit Removal

2 channels 24' X 2' X 3' deep each

Comminution

One 3/8" mechanically cleaned comminutor rated at 1.67 mgd.

SECONDARY TREATMENT

Aeration Tank

Mixing Volume: 4144 ft.^{3}
Reaeration Volume: 10,487 ft.^{3}

Clarifier

Volume: 15,635 ft.^{3}

Air Supply:

2 blowers @ 61 hp.

TERTIARY TREATMENT

Phosphorous Removal

5000 gal. storage tank.

SLUDGE TREATMENT

Aerobic Digester

Two compartments 12,032 ft.^{3}

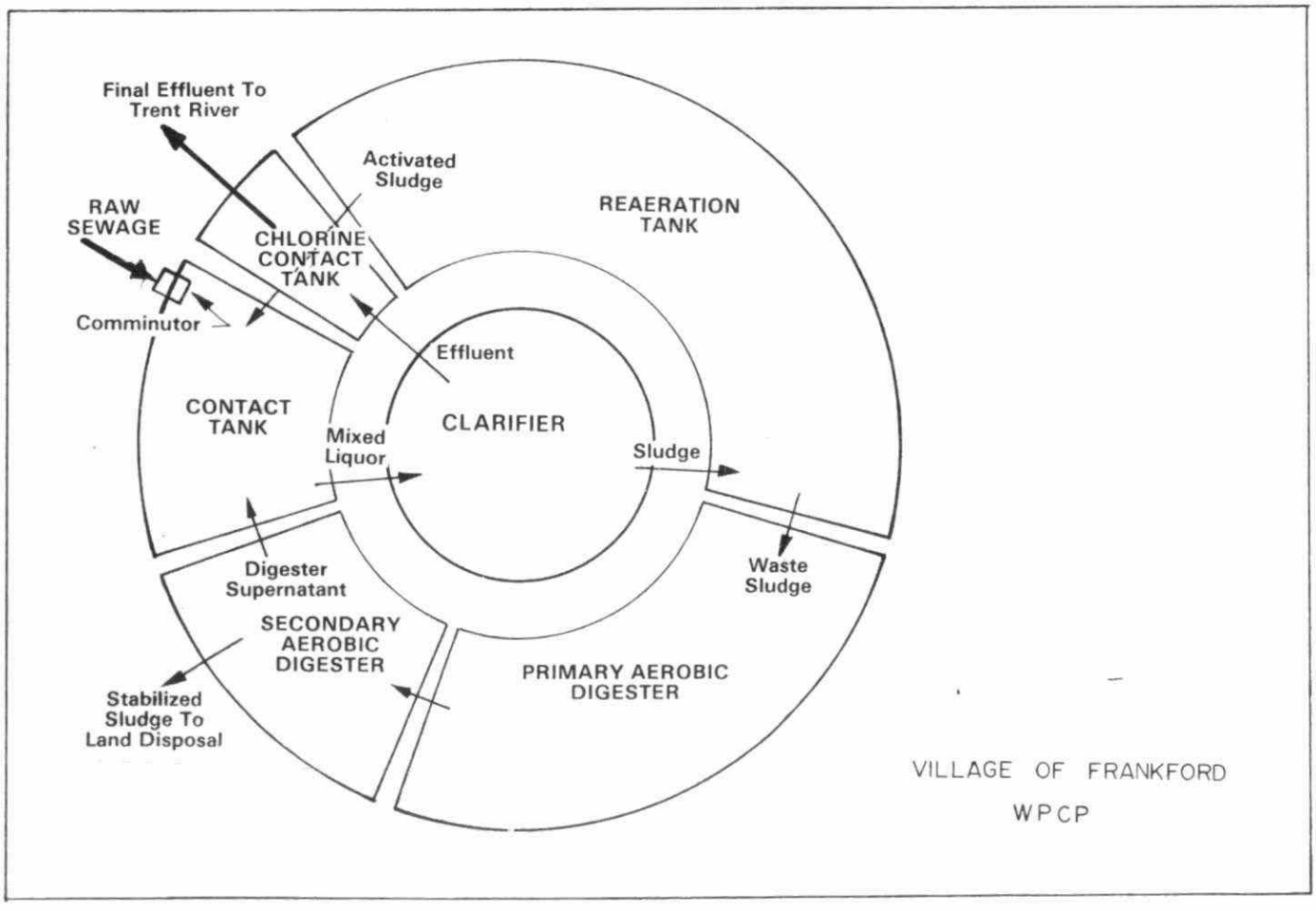
CHLORINATION

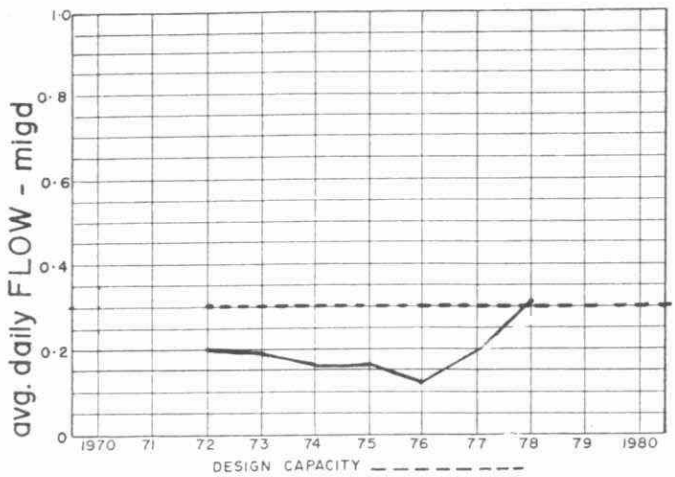
Chlorine Contact Chamber

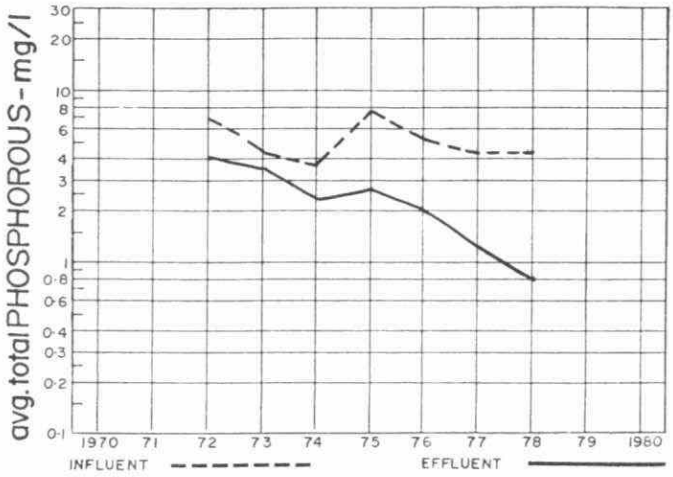
Volume: 1200 ft.^{3}

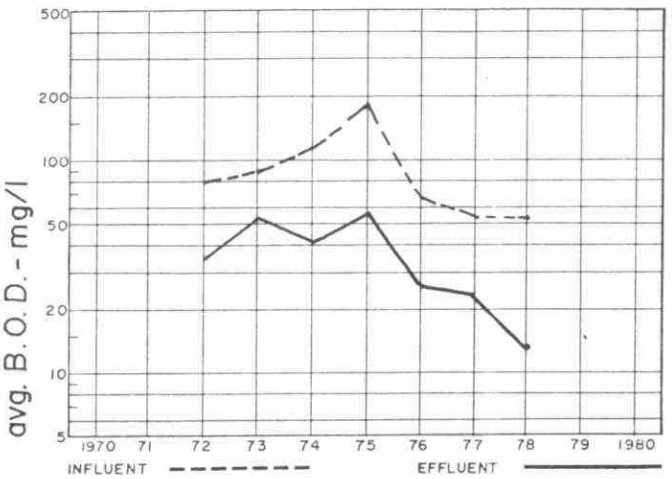
OUTFALL

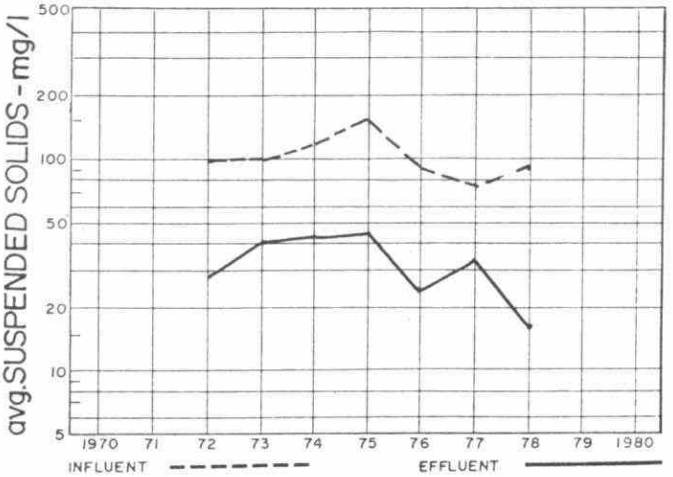
To Trent River.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000267 — FRANKFORD W P C P

MUNICIPALITY : FRANKFORD
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,872 *

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	13.160	.420	.850	1.180	60.0	8.0	86	6.8	70.0	25.0	64	5.9	5.0	*		
FEB	8.530	.300	.430	.520	49.0	28.0	42	1.7	43.0	27.5	36	1.3	2.6	1.0	61	.1
MAR	13.021	.440	1.030	1.200	65.0	10.0	84	7.1	65.0	22.0	66	5.5	3.5	1.2	65	.2
APR	22.869	.762	1.200	1.200	15.0	28.0	-	-	28.0	24.5	12	.8	3.8	*		
MAY	10.480	.338	.530	.840	20.0	20.0			194.0	*			3.9	.6	84	.3
JUN	5.756	.192	.240	.700	44.0	14.0	68	1.7	50.0	27.5	45	1.2	5.0	1.0	80	.2
JUL	6.340	.200	.250	1.210	42.0	20.0	52	1.3	92.0	10.6	88	5.1	5.0	.8	84	.2
AUG	7.050	.227	.280	.850	80.0	10.3	87	4.9	81.0	13.5	83	4.7	4.7	.2	95	.3
SEP	6.880	.230	.250	.990	73.0	6.0	91	4.6	113.0	7.5	93	7.2	4.3	*		
OCT	4.990	.160	.210	.640	83.0	11.3	86	3.5	81.0	12.0	85	3.4	4.1	*		
NOV	6.030	.201	.320	.600	58.0	6.0	89	3.1	80.0	14.5	81	3.9	4.7	*		
DEC	6.440	.207	.660		54.0	*			104.0	*			3.5	*		
TOTAL	111.546							34.7				39.0				1.3
AVERAGE		.306	MAXIMUM 1.200	MAXIMUM 1.210	53.5	14.6	72		83.4	18.4	77		4.1	.8	80	
NO. OF SAMPLES					19	18			61	55			99	48		

Ministry of the Environment
Ontario

Northeastern Region
(5)

REGIONAL OFFICE

SUDBURY
199 Larch St.
705-675-4501

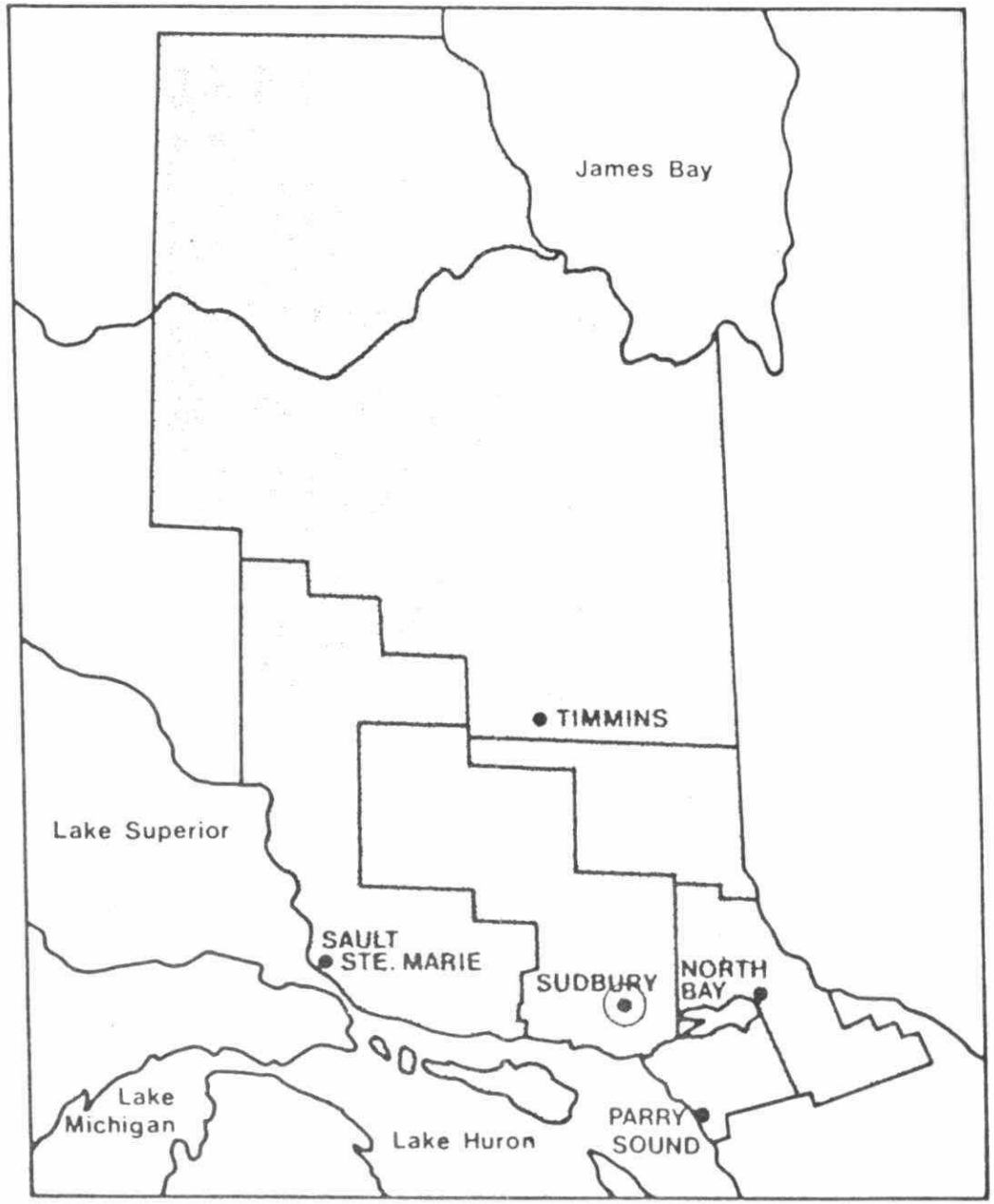
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

HAILEYBURY

PROJECT Town of Haileybury WPCP

PROJECT NO.	1-0069-67	
DESIGN FLOW	0.350 mgd	
BOD - Raw Sewage	170 mg/l	
- Removal	90%	
SS - Raw Sewage	200 mg/l	
- Removal	90%	

PUMPING STATION

Two - 625 IGPM @ 61 ft TDH
One Diesel engine

GRIT REMOVAL

Type: Manually cleaned channels
Size: Two

SCREENING

Bar Screen 1 3/4" openings

AERATION

Volume: 8,300 ft^3 or 52,400 gal
Detention: 3.6 hr @ 0.35 mgd
Diffusers: S & L Aluminum

REAERATION SECTION

Volume: 21,330 ft^3 or 132,900 gal
Detention: 7.6 hr @ max. return rate of 417,600 Igpd

AEROBIC DIGESTER

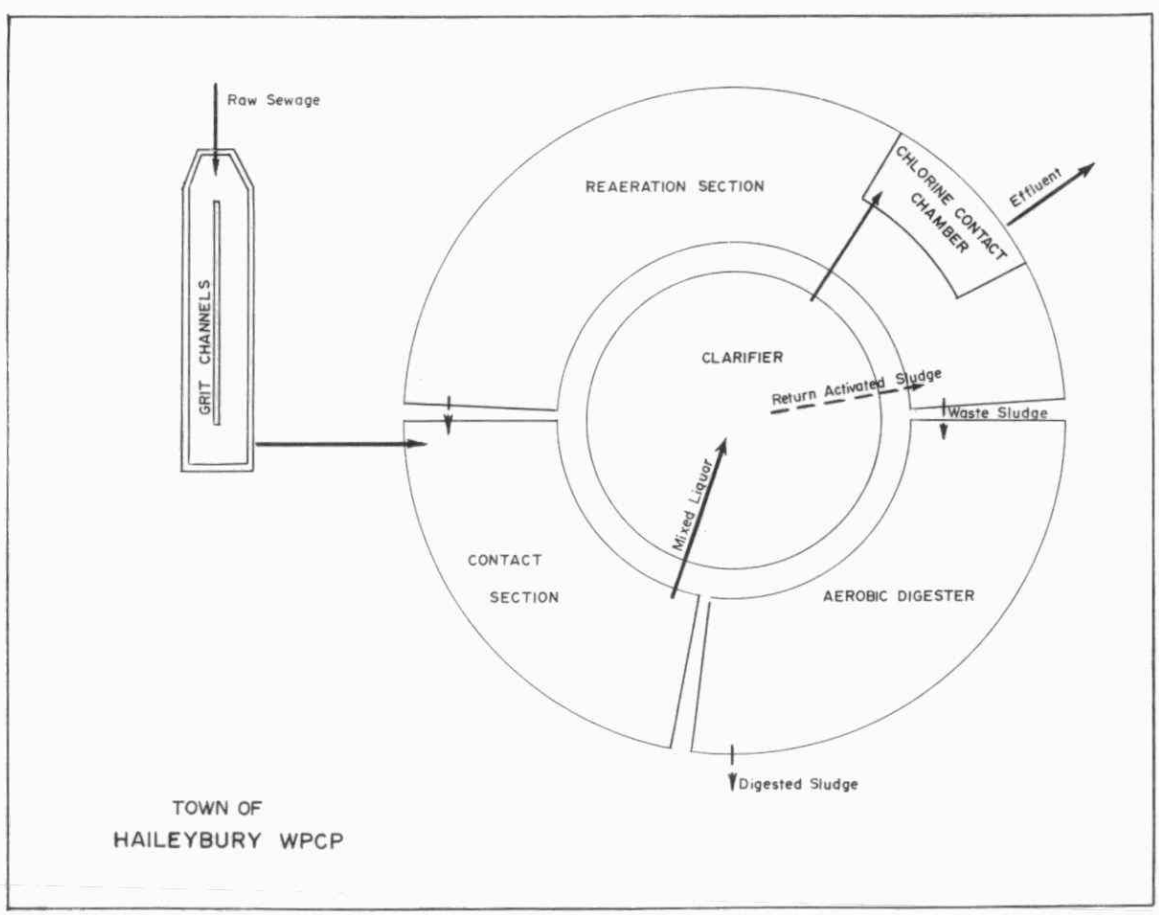
Volume: 15,000 ft^3 or 93,400 gal
Loading: 4.3 ft^3/capita

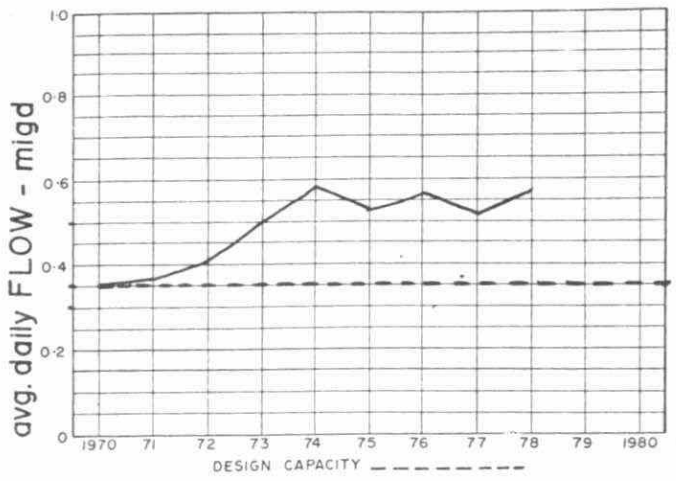
SEDIMENTATION

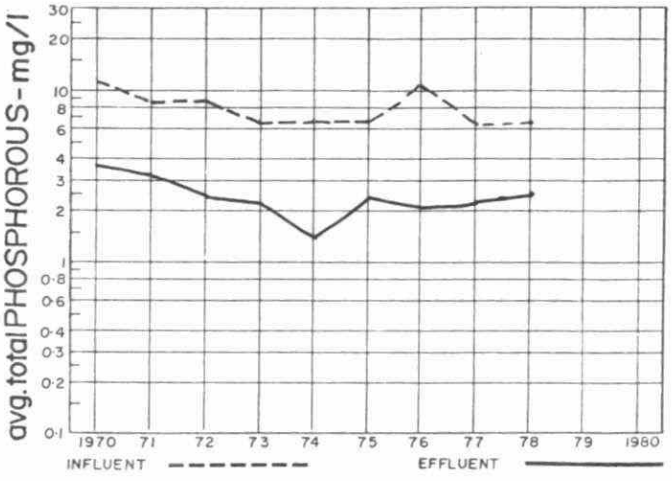
Volume: 12,100 ft^3 or 75,500 gal
Detention: 5.7 hr @ 350,000 Igpd
Loading: Surface weir

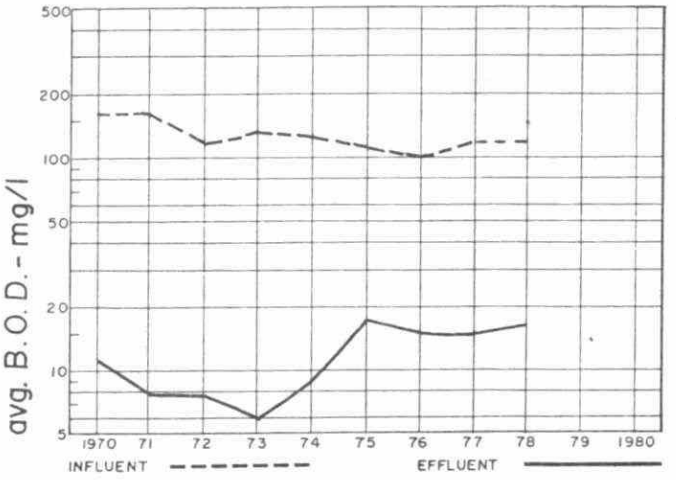
CHLORINE CONTACT CHAMBER

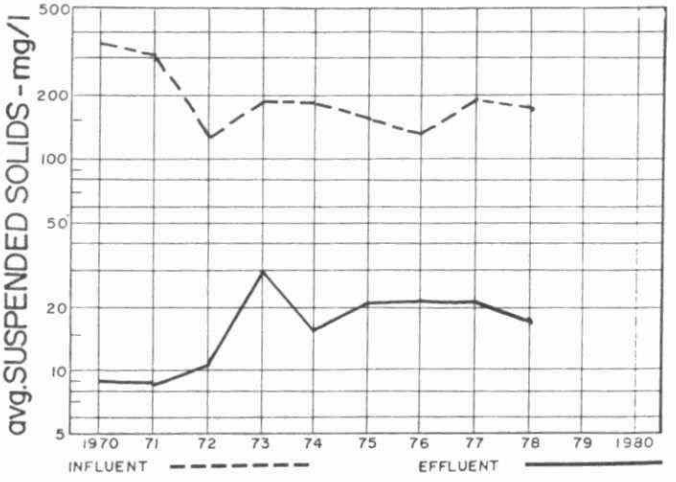
Volume: 8600 gal
Detention: 35 min @ 0.35 mg











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000310 — HAILEYBURY WPCP

MUNICIPALITY : HAILEBURY
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 4,997

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.350 MIGD — DESIGN BOD5 : 170.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	13.132	.423	.493	.864	210.0	4.0	98	27.0	138.0	8.0	94	17.0	6.9	3.0	56	.5
FEB	12.335	.441	.513		300.0	7.0	97	36.1	455.0	9.0	98	55.0	11.0	3.7	66	.9
MAR	14.990	.483	.620	.860	140.0	10.0	92	19.4	148.0	10.0	93	20.6	7.8	1.9	75	.8
APR	21.010	.700	.890	.860	54.0	49.0	9	1.0	66.0	64.0	3	.4	2.6	2.4	7	
MAY	19.456	.627	.801	.856	95.0	41.0	56	10.5	131.0	33.0	74	19.0	*	3.3		
JUN	15.738	.525	.638	.865	152.0	16.0	89	21.4	345.0	9.0	97	52.8	8.6	1.1	87	1.1
JUL	*	*	*		*	*			*	*			*	*		
AUG	*	*	*		*	*			*	*			*	*		
SEP	18.268	.609	.793	.865	130.0	10.0	92	21.9	220.0	6.0	97	39.0		2.3		
OCT	23.135	.746	.917		105.0	20.3	80	19.5	295.0	34.0	88	60.3	8.9	2.5	71	1.4
NOV	24.492	.816	1.456	.865	65.0	8.0	87	13.9	103.0	9.0	91	23.0	4.3	3.6	16	.1
DEC	25.692	.828	1.118	.865	60.0	4.0	93	14.3	75.0	7.0	90	17.4	3.3	2.0	39	.3
TOTAL	188.248							185.0				304.5				5.1
AVERAGE		.620	MAXIMUM 1.456	MAXIMUM .865	131.1	16.9	87		197.6	18.9	90		6.6	2.5	61	
NO. OF SAMPLES					17	17			17	17			14	17		

IROQUOIS FALLS

PROJECT Town of Iroquois Falls

PROJECT NO. 1-0096-67

TREATMENT
Prefabricated Package Plant
Dorr Oliver - Long. 2 units.

DESIGN FLOW 0.9 MGD

DESIGN POPULATION 7150

PRETREATMENT

GRIT REMOVAL
2 channels
COMMINUTION
1 Comminutor and bypass channel with manually cleaned screen.

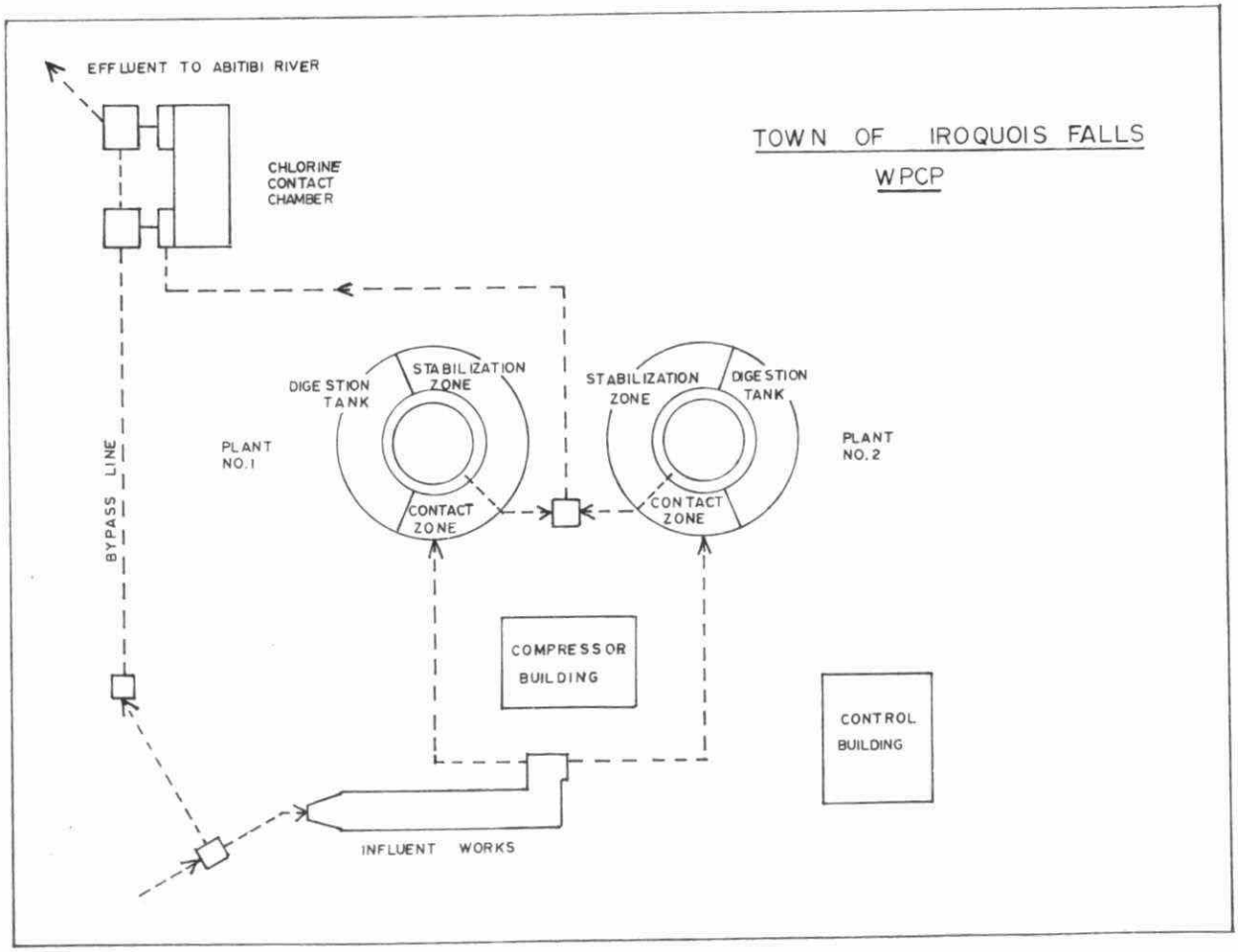
SECONDARY TREATMENT

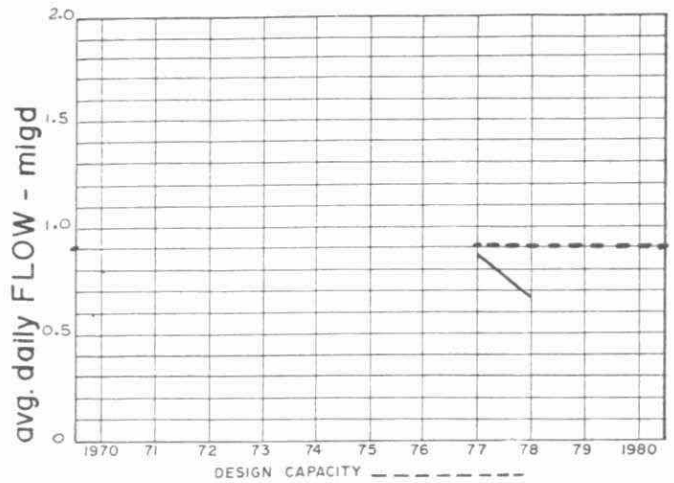
Total contact tank aeration volume:	17430 ft^3
Detention:	2.9 hrs.
Total reaeration tank volume:	34,866 ft^3
Detention (Based on 100% return):	5.8 hrs.
Aerobic Digester Volume:	31,366 ft^3

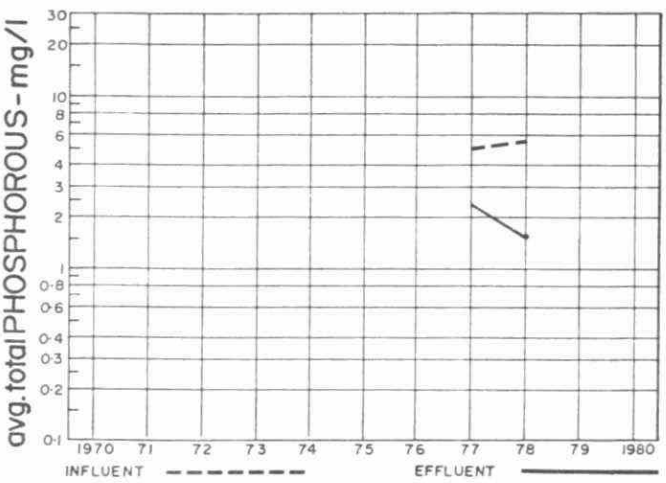
AIR SUPPLY
3 blowers @ 925 cfm and 75 h.p.
CLARIFIER
Two clarifiers 46.5 ft. dia. and 13.0 ft. SWD
Surface overflow rate: 265 gal/ft^2/day.

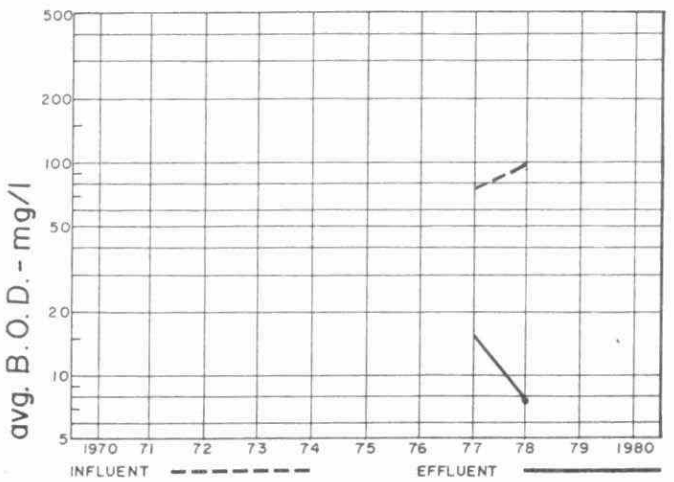
CHLORINATION

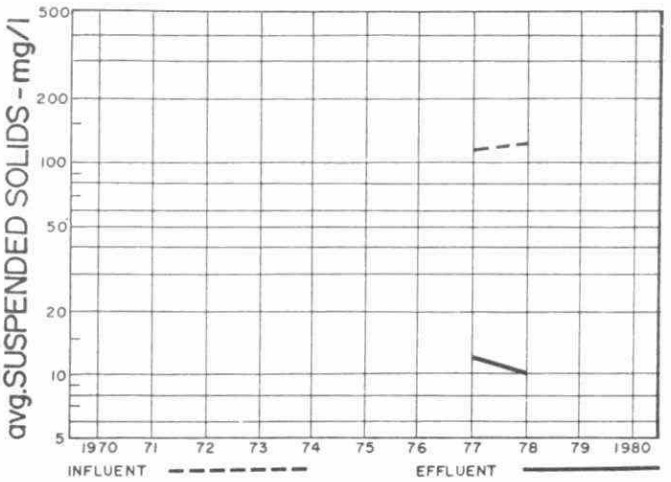
Chlorine contact tank volume:	19,500 gal.
Detention:	30 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110002121 — IROQUOIS FALLS WPCP

MUNICIPALITY : IROQUOIS FALLS
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 6,451

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.900 MIGD — DESIGN BOD5 : 155.0 MG/L — DESIGN SUSP.SOLIDS : 160.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	10.305	.332	.380	.500	48.0	9.0	81	4.0	92.0	15.0	83	7.9	3.7	2.8	24	
FEB	8.794	.314	.352	.500	128.0	17.0	86	9.7	175.0	12.0	93	14.3	6.3	2.2	65	.3
MAR	14.982	.483	.732	1.200	90.0	13.0	85	11.5	167.0	11.0	93	23.3	5.5	2.3	58	.4
APR	34.286	1.142	2.312	3.300	83.0	7.9	90	25.7	176.0	8.6	95	57.3	4.6	.8	81	1.2
MAY	32.011	1.032	1.894	2.700	30.0	15.0	50	4.8	74.0	9.0	87	20.8	3.7	1.8	51	.6
JUN	29.766	.992	2.097	2.800	102.0	2.2	97	29.7	142.0	9.0	93	39.5	5.2	.7	86	1.3
JUL	25.169	.811	1.539	3.200	95.0	4.0	95	22.9	123.0	9.0	92	28.6	4.5	1.3	71	.8
AUG	19.294	.622	1.258	2.800	150.0	2.5	98	28.4	100.0	12.0	88	16.9	8.5	*		
SEP	17.849	.594	.964	2.200	105.0	3.5	96	18.1	127.0	5.0	96	21.7	6.0	2.0	66	.7
OCT	25.684	.828	1.938	3.000	140.0	1.4	99	35.5	181.0	8.0	95	44.4	10.0	1.3	87	2.2
NOV	15.831	.527	1.087	2.200	96.0	6.3	93	14.2	146.0	10.0	93	21.5	*	*		
DEC	13.616	.439	.501	.900	70.0	11.0	84	8.0	118.0	11.5	90	14.5	5.4	*		
TOTAL	247.587							212.5				310.7				7.5
AVERAGE		.676	MAXIMUM 2.312	MAXIMUM 3.300	94.7	7.7	91		135.0	10.0	92		5.7	1.6	70	
NO. OF SAMPLES					22	22			70	69			19	17		

KIRKLAND LAKE

PROJECT
Town of Kirkland Lake WPCP

PROJECT NO.
1-0248-70

TREATMENT:
Contact Stabilization

DESIGN FLOW:
3.0 mgd

PRETREATMENT

SCREENING
Type: One mechanical screen
Size: 6.0 mgd max.

AERATED GRIT TANK
Size: 6.0 mgd

RAW SEWAGE PUMPS
Type: Five, SMART TURNER GWMFS
Size: 1300 cfm (each) @35' TDH

HOLDING TANK
Size: 0.25 mg

BIOLOGICAL TREATMENT

CONTACT TANK
Size: One 50' dia. x 15' swd
(184,000 I.G.)
Retention: 1.5 hr
Aerator Type: Mechanical

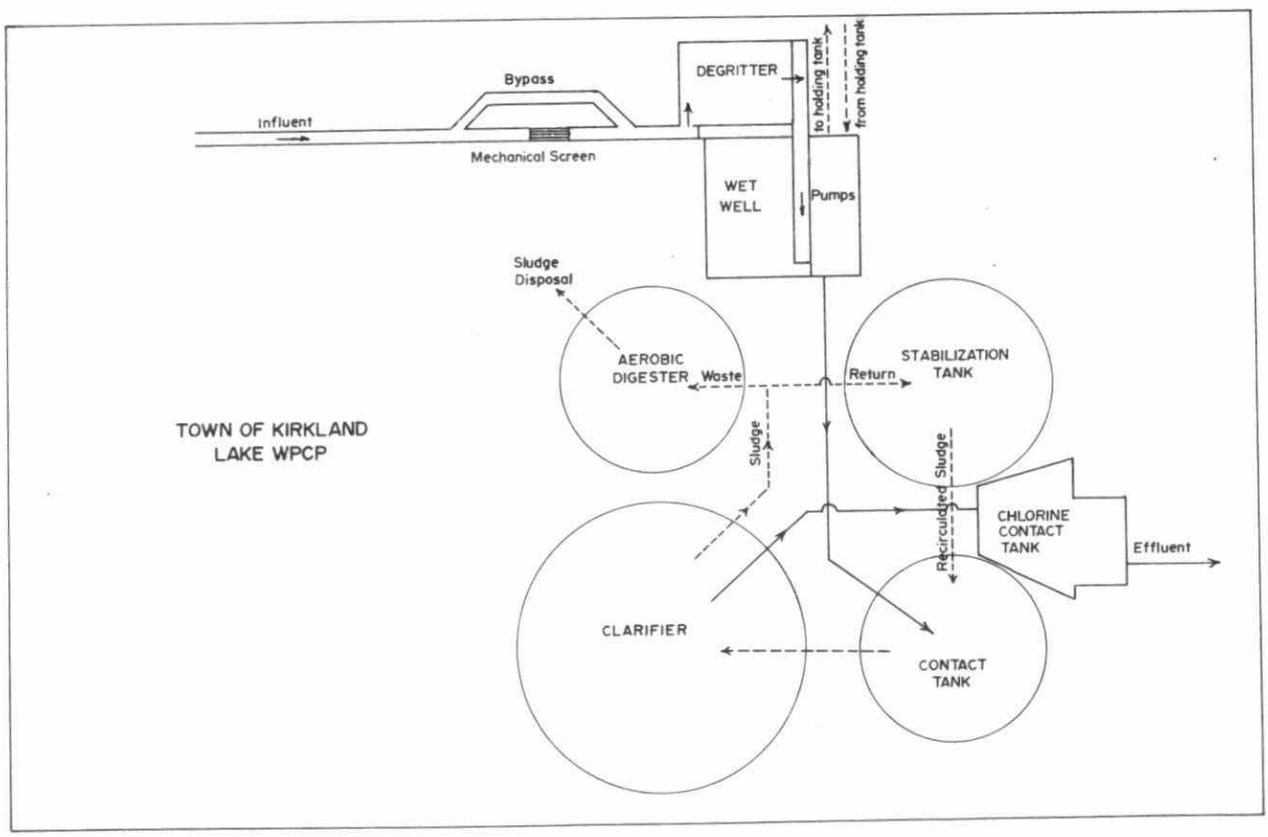
CLARIFIER
Size: One, 80' dia. x 10' swd
(314,000 I.G.)
Retention: 2.5 hr
Loading: Surface 670 gal/ft^2/day
Weir 6350 gal/ft

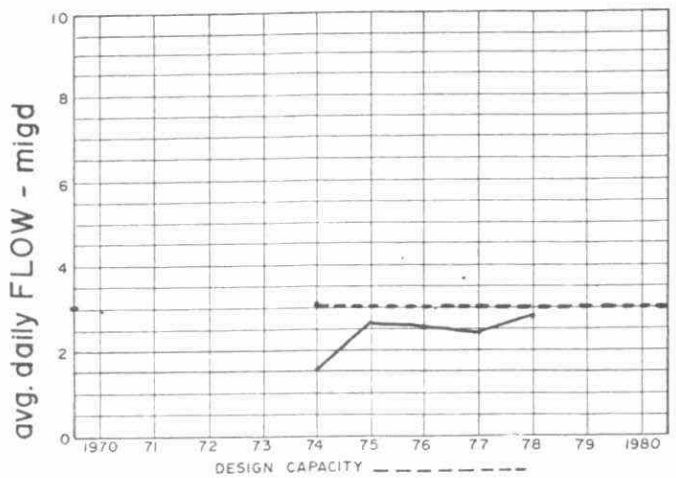
SLUDGE STABILIZATION
Size: One, 56' dia. x 15' swd
(231,000 I.G.)

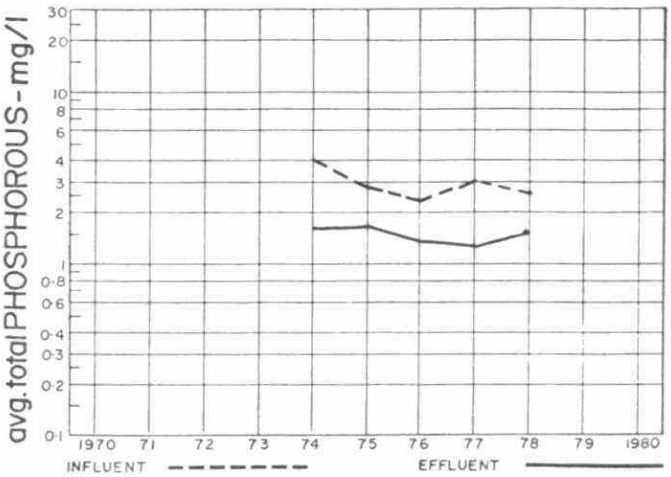
Aerator: Mechanical

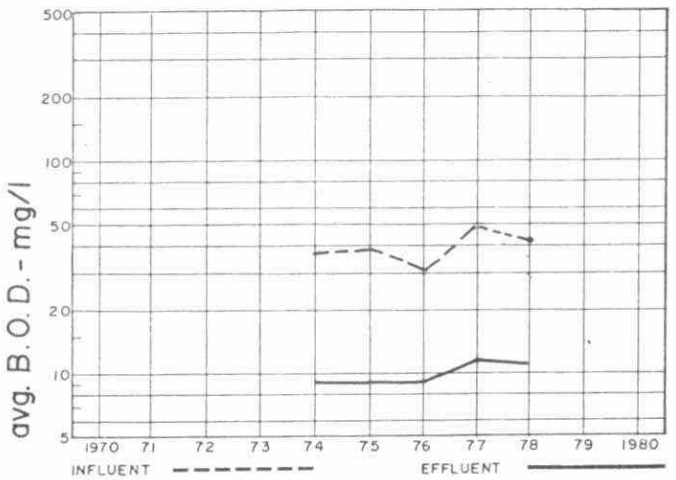
CHLORINE TANK
Size: One, irregular shape 14.6' awl
(43,077 I.G.)
Retention: 21 min.

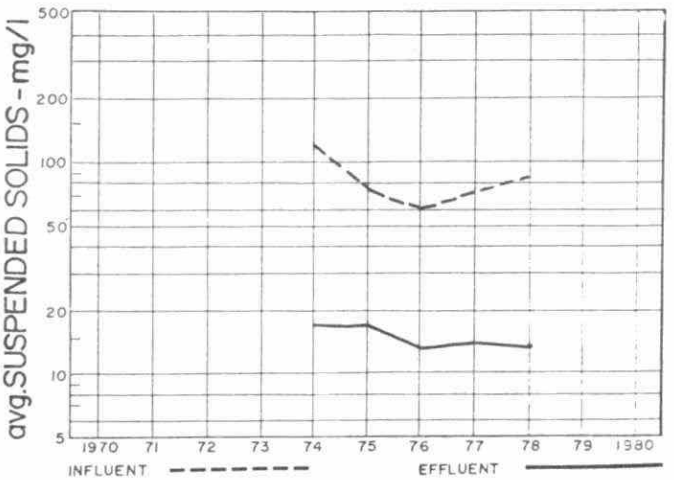
AEROBIC DIGESTER
Size: One, 50' dia. x 18.5' swd
(227,000 I.G.)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 120000015 — MUNICIPAL PLANT KIRKLAND LAKE W P C P

MUNICIPALITY : KIRKLAND LAKE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 12,768

OPERATING AUTHORITY : MUNICIPALITY

DESIGN CAPACITY : 3.000 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	75.330	2.430	2.760	3.000	120.0	8.0	93	84.3	84.0	14.0	83	52.7	3.8	1.3	65	1.8
FEB	80.130	2.860	3.380	3.400	22.0	9.0	59	10.4	83.0	14.0	83	55.2	2.4	1.7	29	.5
MAR	90.790	2.930	3.870	3.500	47.0	13.0	72	30.8	75.0	13.0	82	56.2	2.6	1.6	38	.9
APR	108.230	3.610	5.350	6.100	30.0	15.5	48	15.6	83.0	14.9	82	73.7	2.1	1.4	33	.7
MAY	77.880	2.510	3.470	3.500	18.0	11.8	34	4.8	107.0	18.9	82	68.6	2.2	1.8	18	.3
JUN	68.690	2.289	4.080	11.000	38.0	7.3	80	21.0	74.0	12.8	82	42.0	3.0	1.0	66	1.3
JUL	89.970	2.902	5.840	11.000	34.0	11.3	66	20.4	79.0	12.6	84	59.7	2.5	1.1	56	1.2
AUG	71.210	2.300	2.950	11.000	35.0	9.0	74	18.5	71.0	14.5	79	40.2	2.6	1.3	50	.9
SEP	68.930	2.300	3.640	9.400	33.0	16.5	50	11.3	91.0	14.2	84	52.9	2.8	2.2	21	.4
OCT	91.290	2.940	12.000	5.030	50.0	10.0	80	36.5	65.0	13.8	78	46.7	3.1	1.9	38	1.0
NOV	75.310	2.510	3.670	11.000	35.0	10.3	70	18.6	87.0	15.1	82	54.1	3.3	2.0	39	.9
DEC	95.210	3.070	4.060	11.000	28.0	8.3	70	18.7	72.0	11.2	84	57.8	2.9	1.9	34	.9
TOTAL	992.970							290.9				659.8				10.8
AVERAGE		2.721	MAXIMUM 12.000	MAXIMUM 11.000	40.8	10.8	73		80.9	14.0	82		2.7	1.6	42	
NO. OF SAMPLES					23	23			67	74			23	23		

MOOSONEE (OLD TOWNSITE)

PROJECT Moosonee WPCP

PROJECT NO. 1-0002-66

TREATMENT EXTENDED AERATION

DESIGN FLOW 0.112 MIGD

DESIGN POPULATION 1,500

BOD - Raw Sewage - 254 mg/l
- Removal - 90 %

SS - Raw Sewage - 286 mg/l
- Removal - 85 %

PRELIMINARY TREATMENT

Comminution

Type: Chicago Pump Model 7B

CONTACT STABILIZATION

Contact Zone

Size: 9' x 11' x 12'
Volume: 7400 gal.
Retention: 1.6 hr.

Reaeration Zone

Size: 55.5' x 11' x 12'
Volume: 45,700 gal.
Retention: 9.8 hr.

Air Supply

Type: Hoffman
Size: Two, 312 cfm

Diffusers

Type: Shearfusers
Spacing: 22/tank @ 24" centres

Sedimentation

Type: Smith & Loveless
Size: Two, 20,300 gal.
Retention: 4.3 hr.
Loading: Surface 304 gal/ft^2/day
Weir 3343 gal/ft/day

CHLORINATION

Type: Hypochlorination
W & T A&$&

Chlorine Contact Chamber

Size: 2000 gal.
Retention: 26 min.

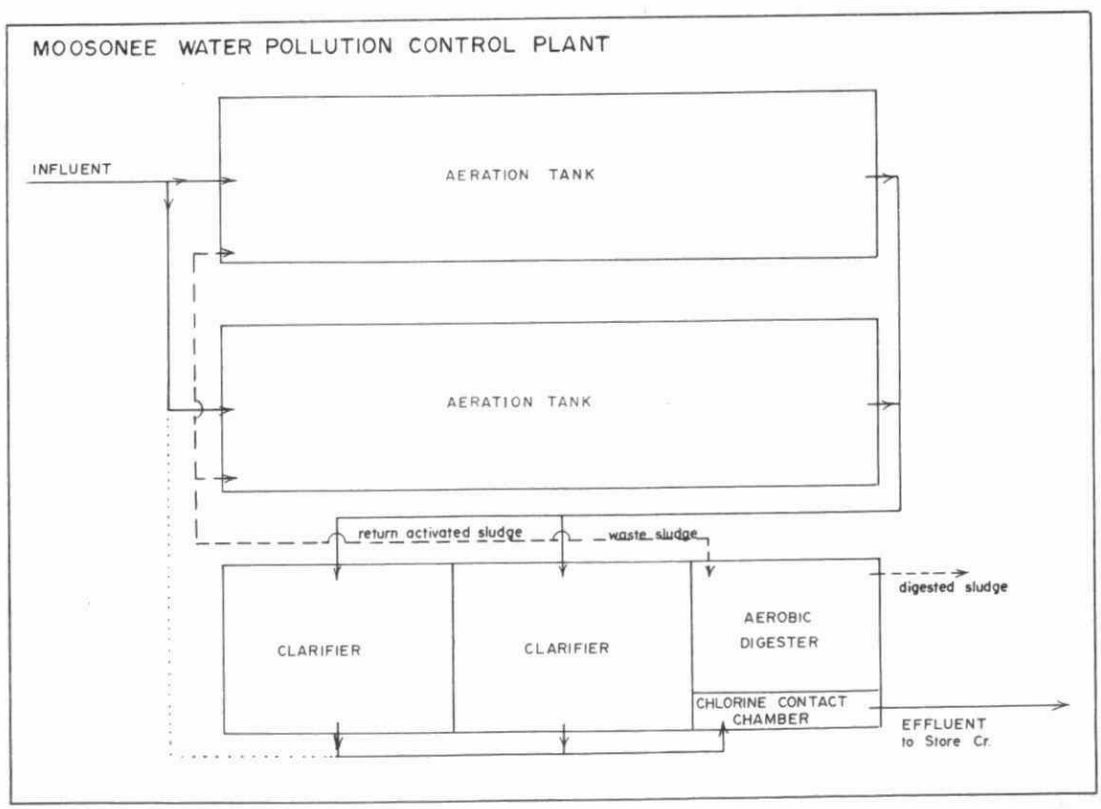
SLUDGE HANDLING

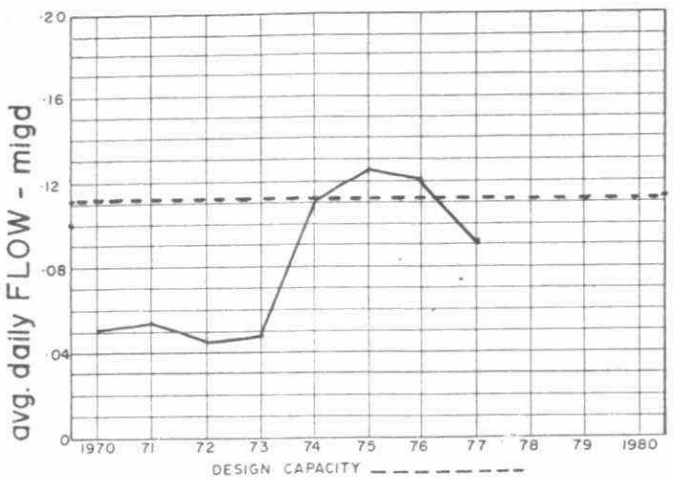
Digestion System - Aerobic

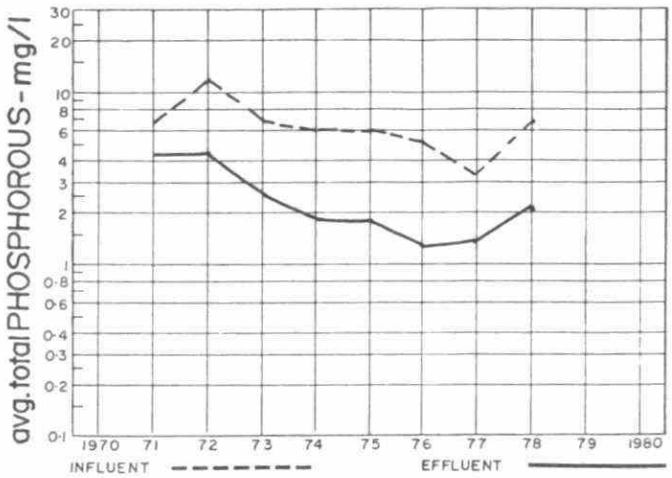
Size: One, 6960 gal.
One, 21,400 gal.

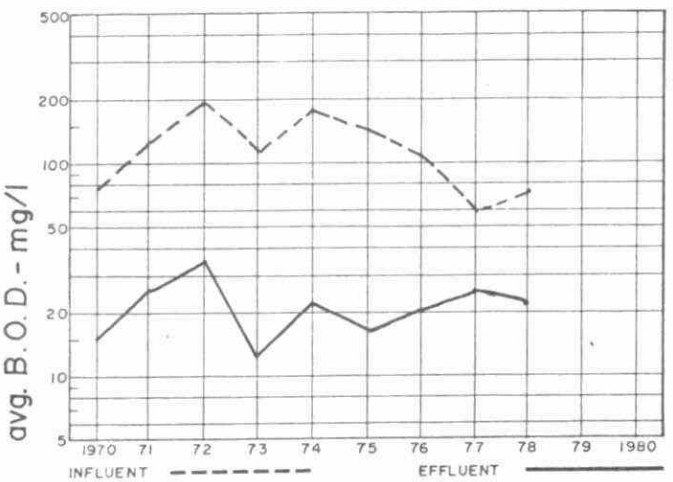
OUTFALL

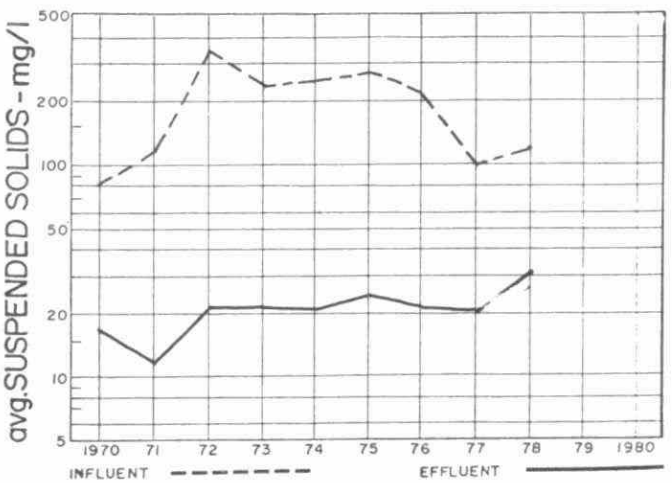
To Store Creek











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001060 — MOOSONEE D.A.B.(OLD TOWNSITE)

MUNICIPALITY : MOOSONEE DEV'L AREA BD
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 1,327

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.112 MIGD — DESIGN BOD5 : 254.0 MG/L — DESIGN SUSP.SOLIDS : 286.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.487	.112	.119		54.0	10.0	81	1.5	123.0	24.0	80	3.4	1.9	1.3	31	
FEB	3.513	.125	.135		95.0	34.0	64	2.1	70.0	40.0	42	1.0	16.0	3.5	78	.4
MAR	3.668	.118	.179		95.0	25.0	73	2.5	142.0	27.0	80	4.2	5.1	2.1	58	.1
APR	2.587	.086	.091		*	*			*	*			*	*		
MAY	2.632	.084	.095		*	*			*	*			*	*		
JUN	2.612	.087	.093		50.0	20.0	60	.7	*	30.0			4.2	1.2	71	
JUL	2.221	.072	.088		*	*			*	*			*	*		
AUG	2.617	.084	.093		*	*			*	*			*	*		
SEP	2.365	.079	.088		*	*			*	*			*	*		
OCT	2.336	.075	.081		*	*			*	*			*	*		
NOV	2.272	.075	.090		*	*			*	*			*	*		
DEC	3.074	.099	.139		*	*			*	*			*	*		
TOTAL	33.384							6.8				8.6				.5
AVERAGE		.091	MAXIMUM .179	MAXIMUM	73.5	22.2	69		111.6	30.2	72		6.8	2.0	70	
NO. OF SAMPLES					5	5			4	5			5	4		

Ministry of the Environment
Ontario

Northwestern Region
⑥

REGIONAL OFFICE
THUNDER BAY
435 James St. S.
P.O. Box 5000
807-475-1205

DISTRICT OFFICE
Kenora
808 Robertson St.
807-468-5578

James Bay
KENORA
THUNDER BAY
Lake Superior

LONGLAC

PROJECT Twp of Longlac WPCP
Project No: 1-0014-66
Treatment: Contact Stabilization
Design Flow: 0.54 MIGD
BOD: Raw Sewage 425 lb. BOD/day

PRETREATMENT

GRIT CHANNELS:
Two, each 21' x 1.5' x 2' swd
Volume (each): 393 I. Gal.
Detention (each) 2.7 min.

COMMINUTOR:
Type: A 10R

BIOLOGICAL TREATMENT

MIXING TANK:
Volume: 26,000 I. Gal. Detention: 3 hours

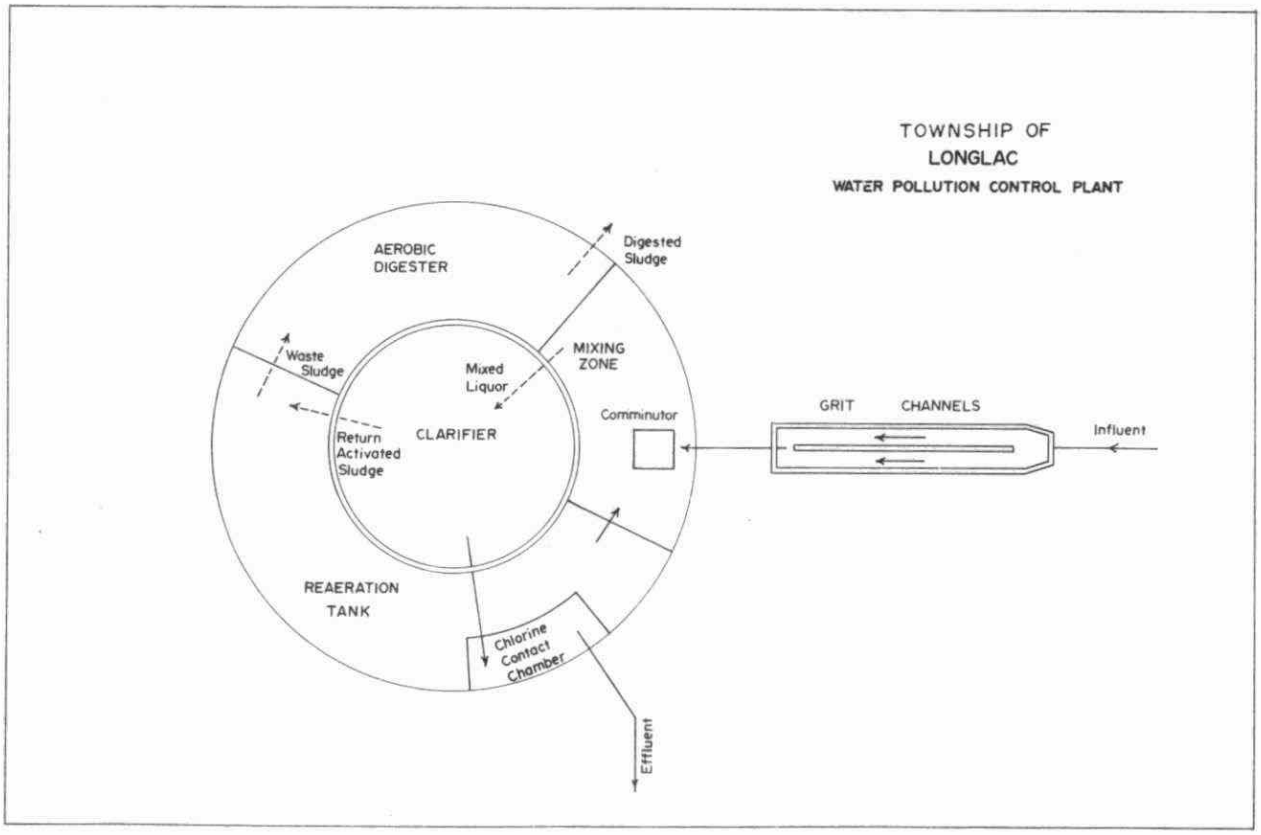
SETTLING TANK
Volume: 37,000 I. Gal. Detention: 4.2 hours
Overflow Rate: 577 I. Gal/ft^2/day

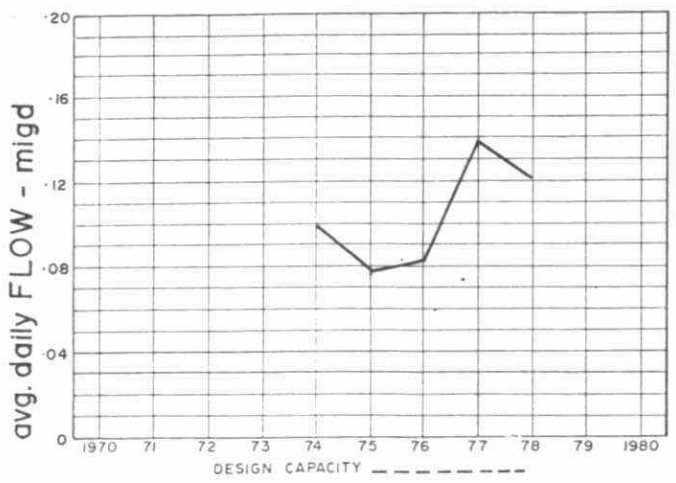
REAERATION TANK:
Volume: 66,000 I. Gal.

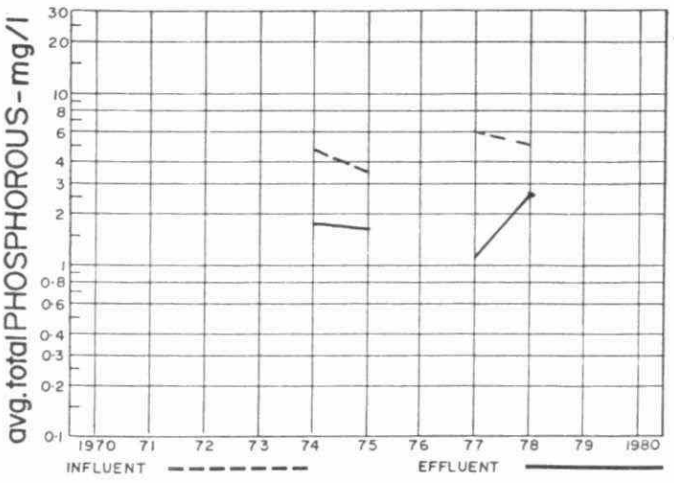
Blowers: Two Type: SUTORBILT 8HB
Size: 590 cfm at 9 psi

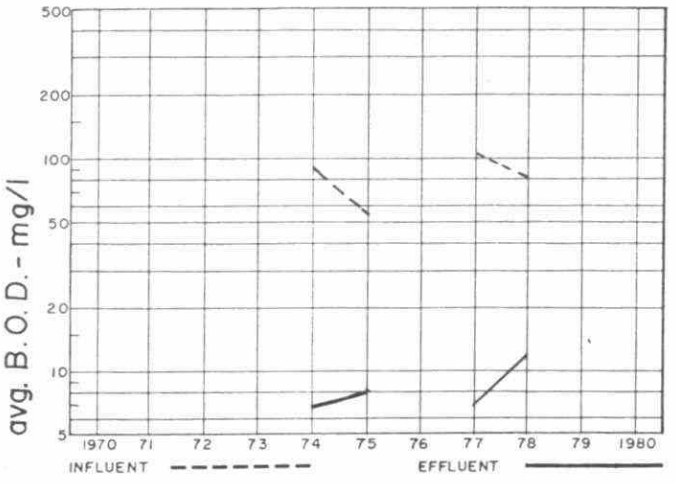
AEROBIC DIGESTER:
Volume: 46,800 I. Gal.

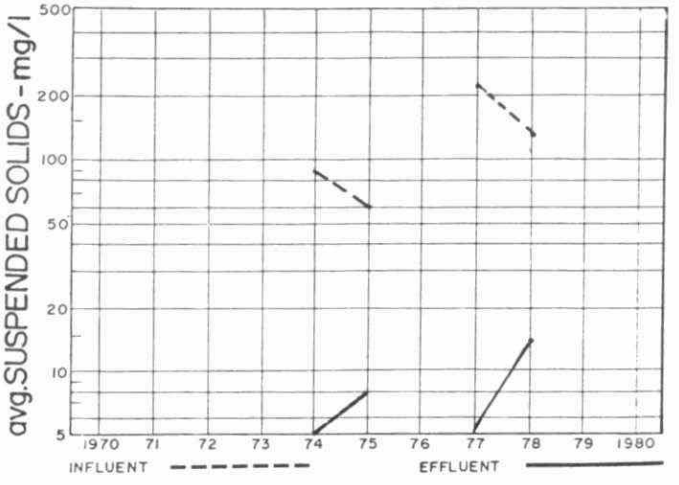
CHLORINE CONTACT CHAMBER:
Volume: 4300 I. Gal.
Detention: 30 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001042 — LONGLAC W P C P

MUNICIPALITY : LONGLAC
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABILIZATION

CURRENT POPULATION : 2,189

* DATA NOT AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.540 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP. SOLIDS : 200.0 / MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.955	.063	.070		97.0	6.0	93	1.7	110.0	3.0	97	2.0	6.7	3.8	43	
FEB	1.698	.061	.074		145.0	10.0	93	2.2	140.0	9.0	93	2.2	8.7	3.5	59	
MAR	1.930	.062	.076		*	*			*	*			*	*		
APR	3.743	.125	.248		69.0	22.0	68	1.7	93.0	15.0	83	2.9	4.7	2.9	38	
MAY	5.500	.180	.350	.350	23.0	43.0	-	-	60.0	50.0	16	.5	2.5	3.1	-	-
JUN	6.650	.221	.470		57.0	2.6	95	3.6	95.0	12.5	86	5.4	4.6	1.7	6[illegible]	.1
JUL	5.531	.178	.247		39.0	3.6	90	1.9	197.0	10.0	94	10.3	4.0	1.3	67	.1
AUG	4.840	.160	.220		100.0	4.3	95	4.6	140.0	6.5	95	6.4	6.8	2.0	70	.2
SEP	3.470	.120			111.0	4.7	95	3.6	187.0	2.5	98	6.4	6.7	2.3	65	.1
OCT	3.120	.100	.120		80.0	*			110.0	*			4.8	*		
NOV	2.690	.089	.110		*	13.0			*	10.0			*	*		
DEC	2.720	.087	1.000		*	*			*	*			*	*		
TOTAL	43.847							19.3				36.1				.5
AVERAGE		.121	MAXIMUM 1.000	MAXIMUM .350	80.1	12.1	84		125.7	13.1	89		5.5	2.5	53	
NO. OF SAMPLES					17	17			17	17			17	16		

RED LAKE

PROJECT Red Lake Twp. WPCP

PROJECT NO. 1-0040-66

TREATMENT Contact Stabilization

DESIGN FLOW 0.250 MIGD

BOD - Raw Sewage 510 lb/day

RAW SEWAGE PUMPING:
Pumping Station 1
Two, 430 USGPM at 68' TDH

Pumping Station 2
Two, 125 USGPM at 51' TDH

PRETREATMENT

GRIT CHANNELS:
Two, each 20' x 2' x 2'8" swd
Volume: (each) 650 I. Gal. Detention: (each) 3 min.

BAR SCREENS:
$\frac{1}{4}$" x 2" steel bars on 2" centers

BIOLOGICAL TREATMENT

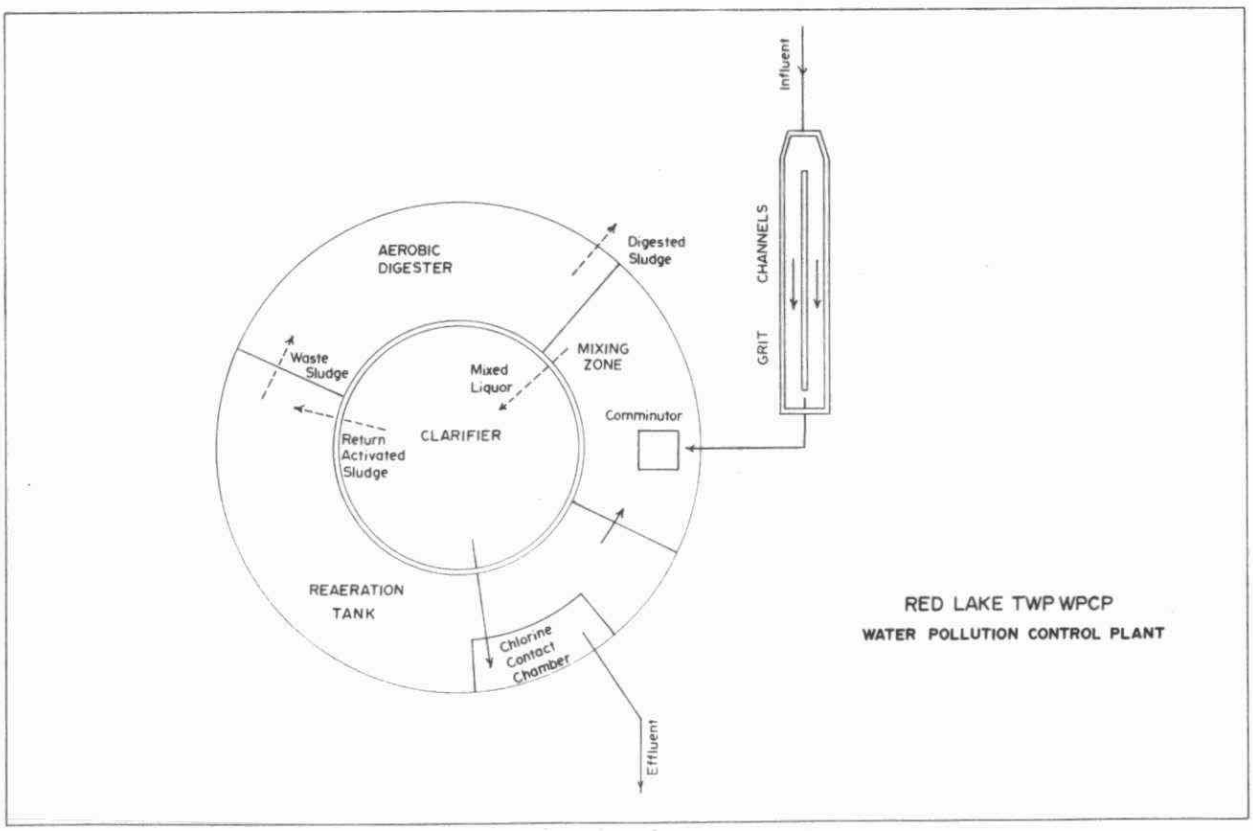
MIXING TANK:
Volume: 33,400 I. Gal.
Contact Time: 2.7 hours

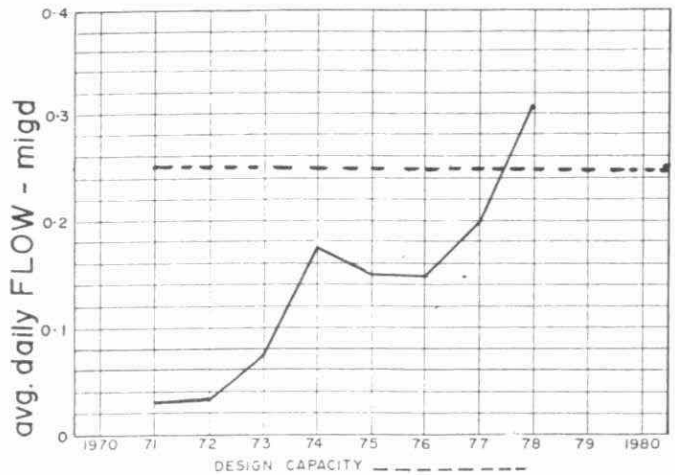
REAERATION TANK:
Volume: 77,400 I. Gal.

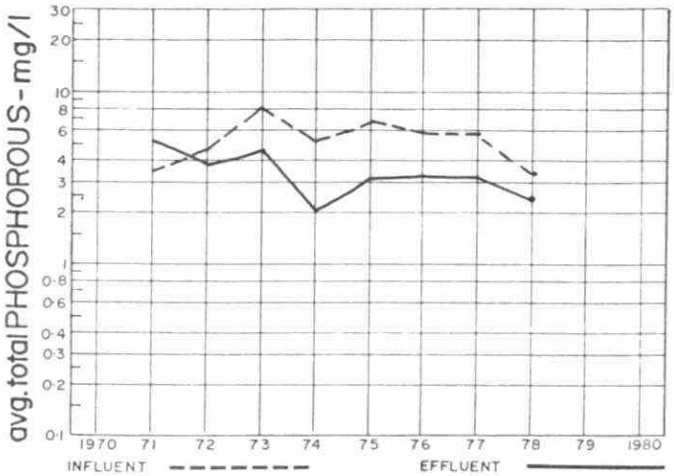
CLARIFIER:
25'8" dia. x 15' swd
Volume: 48,200 I. Gal.
Detention: 3.9 hours
Overflow Rate: 580 I. Gal/ft^2/day

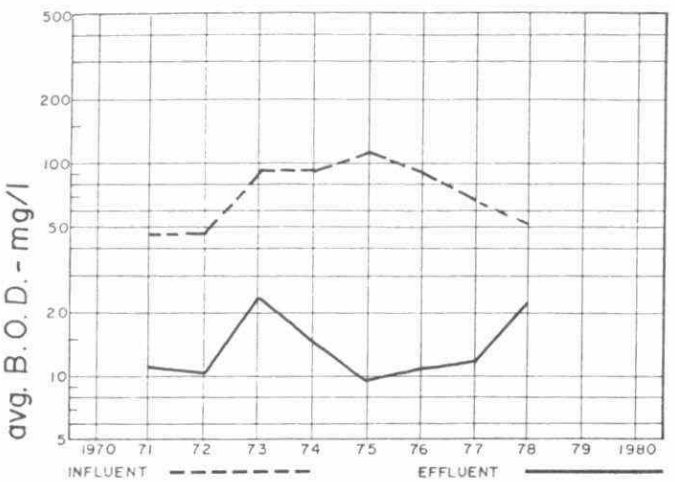
AEROBIC DIGESTER:
Volume: 48,000 I. Gal.

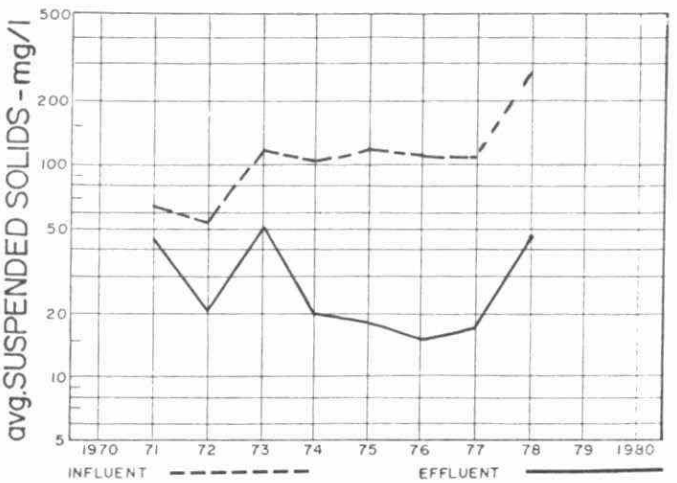
CHLORINE CONTACT CHAMBER:
Volume: 8400 I. Gal.
Detention: 40 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001131 — RED LAKE W P C P

MUNICIPALITY : RED LAKE
REGION : 06 NORTHWESTERN

TREATMENT FACILITY : EXT AERATION/CONT STABLIZATION

CURRENT POPULATION : 2,179

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

* DATA NOT AVAILABLE

DESIGN CAPACITY : 0.250 MIGD — DESIGN BOD5 : 510.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.984	.258	.288		25.0	21.0	16	.3	30.0	20.0	33	.7	4.3	1.7	60	.2
FEB	7.287	.260	.280		65.0	21.0	67	3.2	150.0	35.0	76	8.3	3.8	1.5	60	.1
MAR	7.801	.252	.292		45.0	15.0	66	2.3	123.0	28.0	77	7.4	3.8	2.7	28	
APR	8.828	.294	.410		53.0	13.0	75	3.5	58.0	17.0	70	3.6	3.2	3.0	6	
MAY	11.903	.383	.462		37.0	51.0	-	-	2150.0	93.0	95	244.8	*	4.4		
JUN	10.863	.362	.467		55.0	38.0	30	1.8	110.0	55.0	50	5.9	*	*		
JUL	10.164	.328	.399		75.0	15.0	80	6.0	100.0	75.0	25	2.5	*	*		
AUG	9.529	.307	.346		70.0	30.0	57	3.8	340.0	150.0	55	18.1	*	*		
SEP	9.515	.317	.343		55.0	22.0	60	3.1	85.0	40.0	52	4.2	*	2.6		
OCT	9.810	.316	.389		35.0	26.0	25	.8	45.0	40.0	11	.4	*	*		
NOV	9.316	.311	.380		44.0	11.0	75	3.0	80.0	15.0	81	6.0	2.5	2.7	-	-
DEC	11.380	.367	.434		95.0	7.0	92	10.0	120.0	15.0	87	11.9	*	2.1		
TOTAL	114.380							37.8				313.8				.3
AVERAGE		.313	MAXIMUM .467	MAXIMUM	54.5	22.5	58		282.5	48.5	82		3.5	2.5	26	
NO. OF SAMPLES					15	15			15	15			8	11		

HIGH RATE ACTIVATED SLUDGE PLANTS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
220 11th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
WINDSOR
Lake Erie

MEAFORD

PROJECT Town of Meaford WPCP

PROJECT NO. 1-0003-66

TREATMENT High Rate Activated Sludge

DESIGN FLOW 0.86 mgd

BOD - RAW SEWAGE 400 mg/l

SS - RAW SEWAGE 200 mg/l

COMMINUTOR

Type: Condux type 400
Max. Capacity - 2.58 migd

AERATION TANKS

2 tanks, each 30'0" dia x 19'3" swd
Capacity: 170,000 I.G. total
Detention: 4.7 hours

Aerators

Type: 2 mechanical Ames-Crosta driven by 50 hp electric motors

SECONDARY CLARIFIER

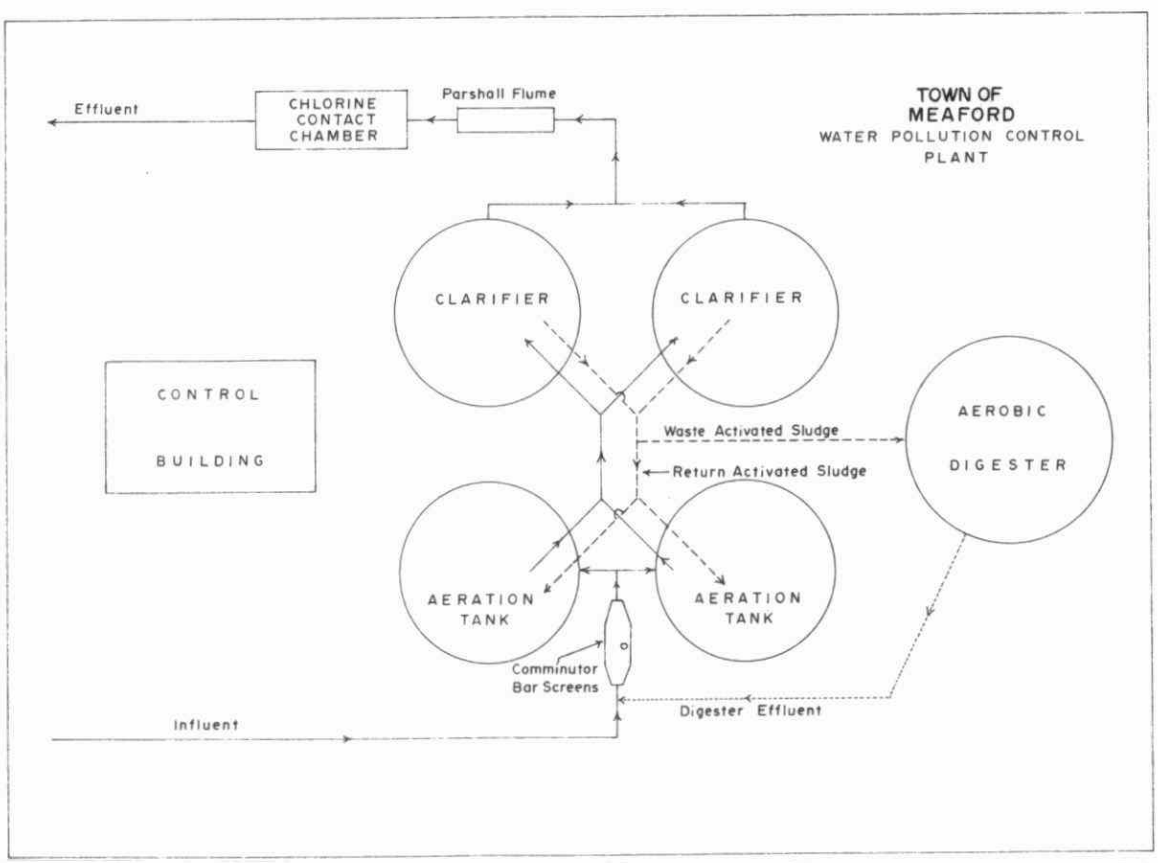
2 clarifiers 40'0" dia x 10'9" avg. swd
Capacity: 168,000 I.G. total
Detention: 4.7 hours
Loading: Surface 340 gal/ft^2/day
Return Sludge Pumps: 2, 720 IGPM @ 30' tdh

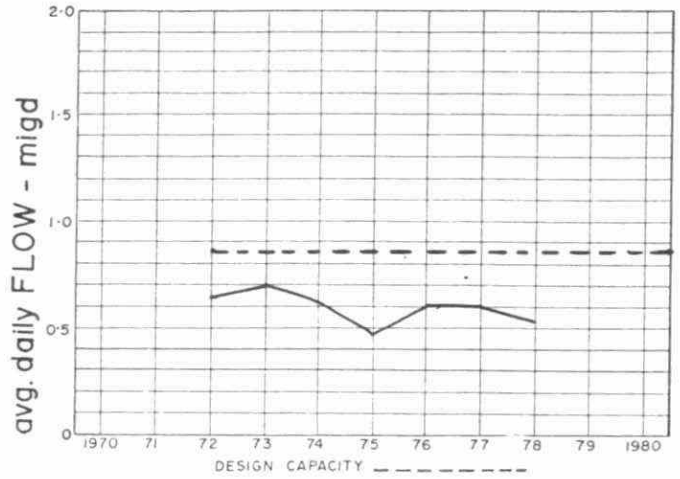
CHLORINE CONTACT CHAMBER

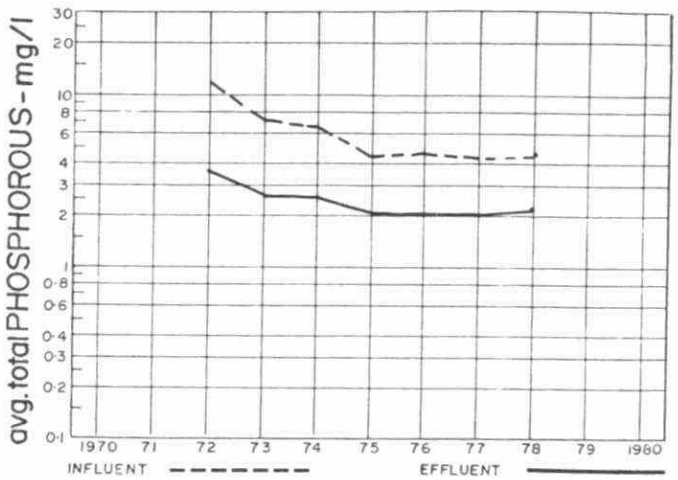
Size: 24' x 8' x 6' 6", 8400 gallons
Detention Time: 14 min.

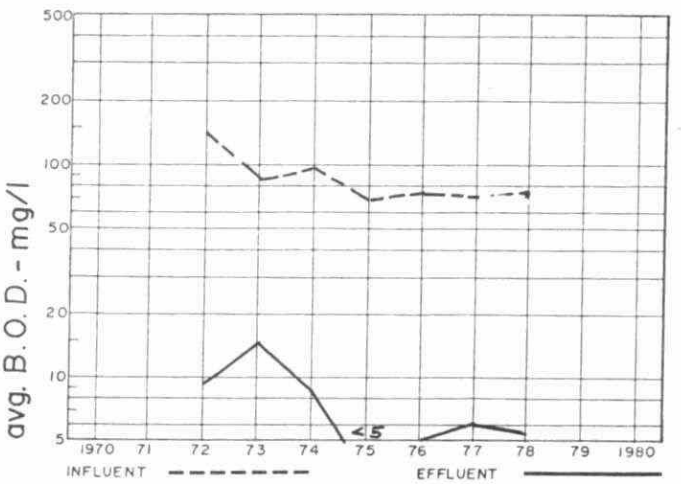
AEROBIC DIGESTER

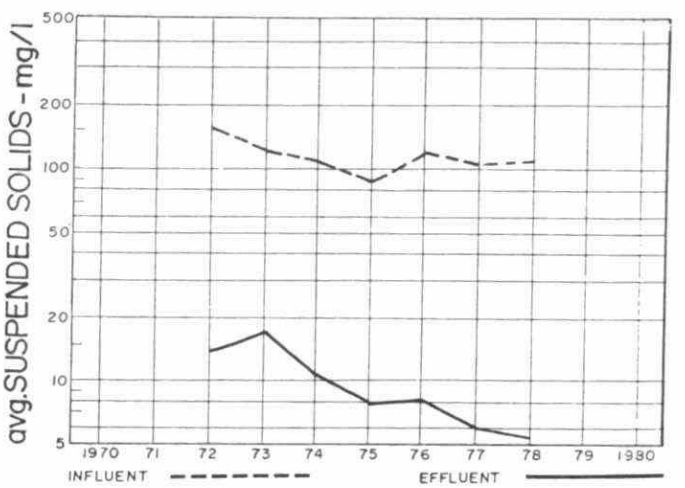
Dimensions: 50'0" dia x 18'6" avg swd.
Capacity: 227,000 I.G.
Aerator: Ames-Crosta mechanical











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000445 — MEAFORD WPCP

MUNICIPALITY : MEAFORD
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : HIGH RATE
EXTENDED AERATION

CURRENT POPULATION : 4,091

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.860 MIGD — DESIGN BOD5 : 400.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	16.440	.530	.630		91.0	7.0	92	13.8	97.0	8.0	91	14.6	4.6	2.0	56	.4
FEB	13.980	.500	.880		72.0	4.0	94	9.5	142.0	5.0	96	19.1	4.1	2.2	46	.2
MAR	20.550	.660	1.130		73.0	10.0	86	12.9	116.0	7.0	93	22.4	4.0	1.9	52	.4
APR	21.727	.724	1.418	1.700	57.0	9.4	83	10.3	77.0	8.5	88	14.8	4.3	1.4	67	.6
MAY	16.352	.527	.638	2.150	70.0	8.2	88	10.1	65.0	10.2	84	8.9	4.9	2.5	48	.3
JUN	14.015	.467	.645	2.150	47.0	2.4	94	6.2	62.0	4.0	93	8.1	2.7	2.2	18	
JUL	13.632	.439	.590	2.200	73.0	3.4	95	9.4	101.0	4.0	96	13.2	5.4	3.0	44	.3
AUG	15.876	.512	.715	2.300	114.0	4.9	95	17.3	353.0	4.2	98	55.3	7.3	3.0	58	.6
SEP	15.627	.521	1.091	7.900	84.0	4.7	94	12.3	77.0	3.5	95	11.4	5.5	2.8	49	.4
OCT	14.812	.478	.707	1.750	83.0	3.4	95	11.7	71.0	2.0	97	10.2	5.8	2.4	58	.5
NOV	14.517	.484	.924	2.100	80.0	3.7	95	11.0	81.0	4.0	95	11.1	5.0	2.4	52	.3
DEC	15.876	.512	1.120	1.800	72.0	5.5	92	10.5	137.0	6.7	95	20.6	4.5	1.7	62	.4
TOTAL	193.404							135.0				209.7				4.4
AVERAGE		.530	MAXIMUM 1.418	MAXIMUM 7.900	76.3	5.5	92		114.9	5.5	95		4.8	2.2	52	
NO. OF SAMPLES					29	30			42	40			29	30		

Ministry of the Environment
Ontario

West Central Region
②

REGIONAL OFFICE

STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES

Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

CAMBRIDGE (HESPELER)

Project: City of Cambridge (Hespeler) WPCP

Project No: 1-0033-66
Treatment: High Rate Activated Sludge
Design Flow: 2.05 MIGD
BOD: Raw Sewage - 4535 lb/day
SS: Raw Sewage - 4080 lb/day

PRETREATMENT

Raw Sewage Pumps:
One: Crane Deming Size: 400 USGPM
Three: Crane Deming Size: 300 USGPM

Comminutor:
Type: CORD 16B

Air Degritter:
Size: 11.75' x 14' x 8' swd
Volume: 8200 I. Gal. Retention: 5.8 min.
Mechanism: CHICAGO PUMP

BIOLOGICAL TREATMENT

Aeration Tanks:
Two, 150' x 7.25' x 13.5' (avg)
Volume: 183,000 I. Gal. Retention: 2.1 Hours

Clarifiers:
Two, 150' x 12.25' x 12.0' awl
Volume: 206,000 I. Gal.
Retention: 2.4 hours
Overflow rate: 545 gpd/sq.ft.

Aerobic Digesters - Stage 1:
Size: Two, 74.5' x 14.75' x 13.5' awl
Volume: 250,000 I. Gal.

Aerobic Digesters - Stage 2:
Size: Two, 74.5' x 14.75' x 13.5' awl
Volume: 250,000 I. Gal.

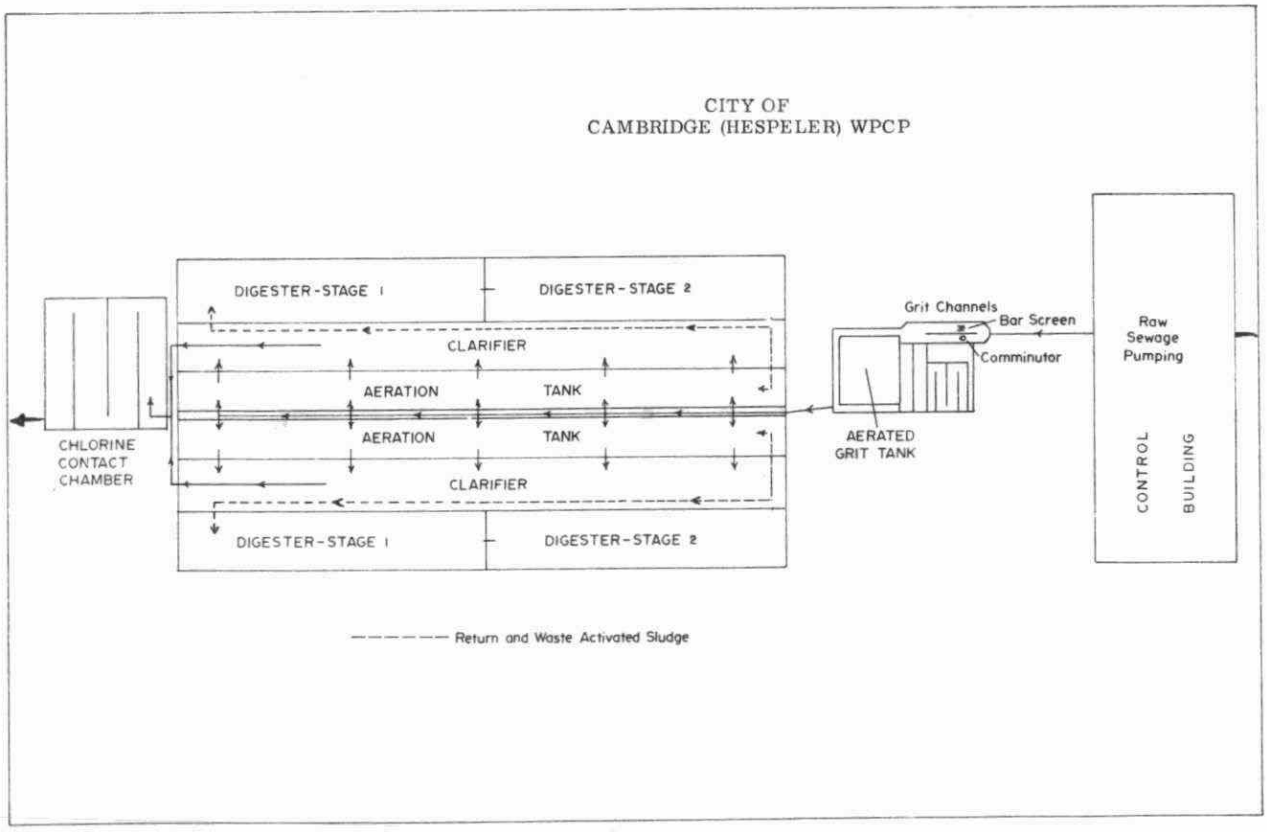
Blowers: Type: Three SUTORBILT 3100
Size: 3550 cfm. 150 HP Motors.

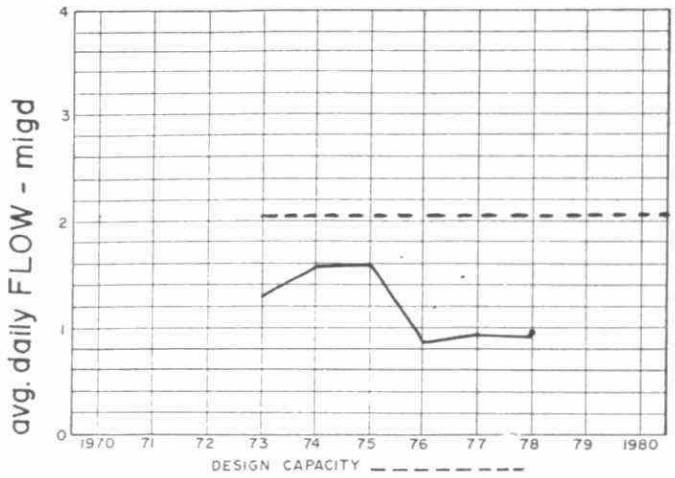
Sludge Pump: Type: MEYERS 40 MPD
Size: 7½ HP

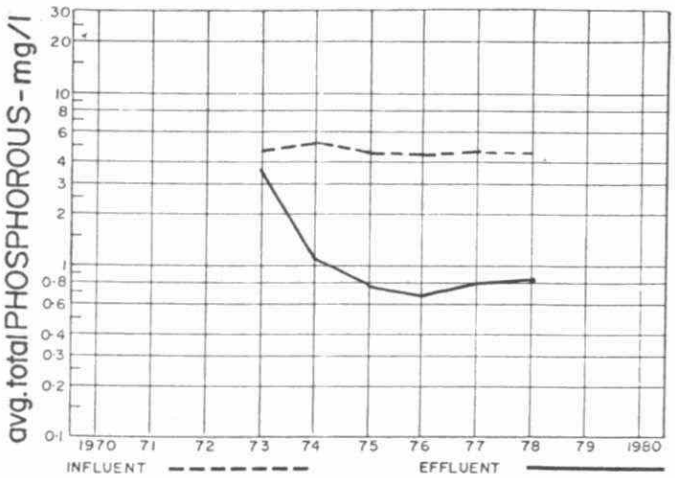
CHLORINATION

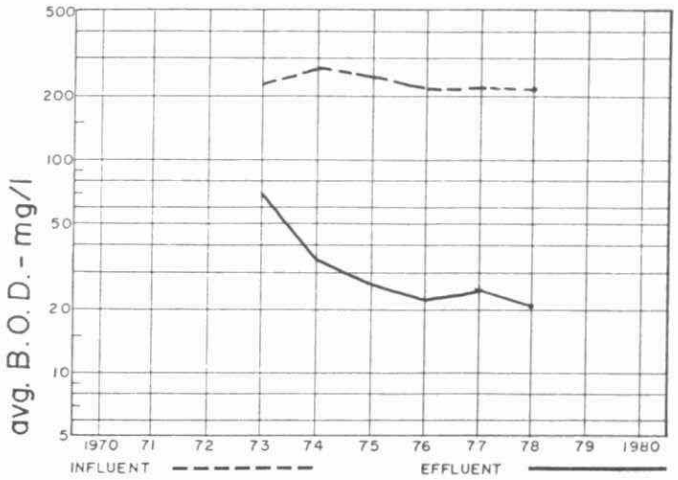
Chlorine Contact Chamber:
30' x 28' x 9' (4-pass)
Volume: 47,000 I. Gal.
Retention: 33 min.

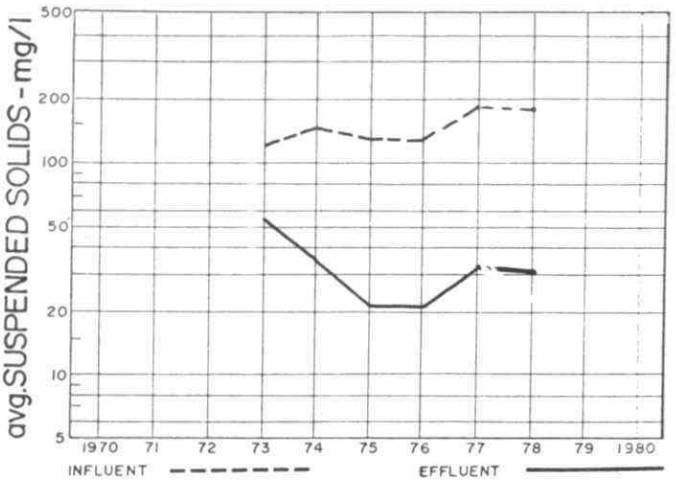
Chlorinator:
Type: W & T A811
Capacity: 500 lb/day











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001033 HESPELER WPCP

MUNICIPALITY : CAMBRIDGE (HESPELER)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : HIGH RATE
PHOSPHORUS REMOVAL

CURRENT POPULATION : 73,314

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 2.050 MIGD DESIGN BOD5 : 260.0 MG/L DESIGN SUSP.SOLIDS : 215.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	31.837	1.030	1.190	4.000	210.0	15.0	92	62.0	130.0	36.0	72	29.9	3.5	1.5	57	.6
FEB	27.134	.970	1.110		212.0	9.0	95	55.0	167.0	26.0	84	38.2	5.3	.9	83	1.1
MAR	34.657	1.040	1.540	4.700	209.0	21.0	89	65.1	177.0	35.0	80	49.2	5.4	.7	87	1.6
APR	33.229	1.149	1.475	3.400	248.0	24.0	90	74.4	150.0	33.0	78	38.8	4.9	.9	81	1.3
MAY	33.436	1.097	1.468	3.700	266.0	25.0	90	80.5	180.0	32.0	82	49.4	5.3	1.0	81	1.4
JUN	30.122	.985	1.249	3.300	212.0	24.0	88	56.6	153.0	26.0	83	38.2	4.7	.8	82	1.1
JUL	25.105	.832	1.068	4.000	191.0	23.0	87	42.1	418.0	18.0	95	100.4	4.4	.4	90	1.0
AUG	25.553	.824	1.034	3.800	171.0	25.0	85	37.3	161.0	22.0	86	35.5	4.6	.5	89	1.0
SEP	27.849	.926	1.587		202.0	23.0	88	49.8	152.0	32.0	78	33.4	4.4	.5	88	1.0
OCT	27.099	.874	1.051	3.200	233.0	18.0	92	58.2	152.0	34.0	77	31.9	4.4	.7	84	1.0
NOV	27.150	.905	1.105	4.000	262.0	24.5	90	64.4	185.0	43.1	76	38.5	5.3	1.0	81	1.1
DEC	26.320	.849	1.244	4.200	161.0	19.0	88	37.3	146.0	39.0	73	28.1	4.9	1.2	75	.9
TOTAL	349.491							682.7				511.5				13.1
AVERAGE		.957	MAXIMUM 1.587	MAXIMUM 4.700	214.7	20.8	90		180.9	31.3	82		4.7	.8	82	
NO. OF SAMPLES					58	99			57	104			56	90		

Ministry of the Environment
Ontario

Central Region

③

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386

Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

Project:	Bradford (town) WPCP
Project No:	1-0035-66
Treatment:	High Rate Activated Sludge
Design Flow:	0.80 MGD
BOD:	Raw Sewage - 230 mg/l
SS:	Raw Sewage - 275 mg/l

PRETREATMENT

COMMINUTION CHAMBER:
Two channels 1.9'w x 6.5' x 1.5 (avg)
with comminutors

BAR SCREEN:
In channel between comminutors

AIR DEGRITTER:
9.75' x 13' x 9.6' (avg)
Volume: 7,600 I. gal.
Detention: 13 min.

BIOLOGICAL TREATMENT

AERATION TANKS:
Two, 17.5' x 62' x 12.75' swd
Volume: 173,000 I. Gal.
Detention: 4.8 hours

SETTLING TANKS:
Two, 14' x 62' x 12.75' (avg)
Volume: 106,000 I. Gal.
Detention: 3.0 hour
Overflow rate: 495 gpd/sq. ft.

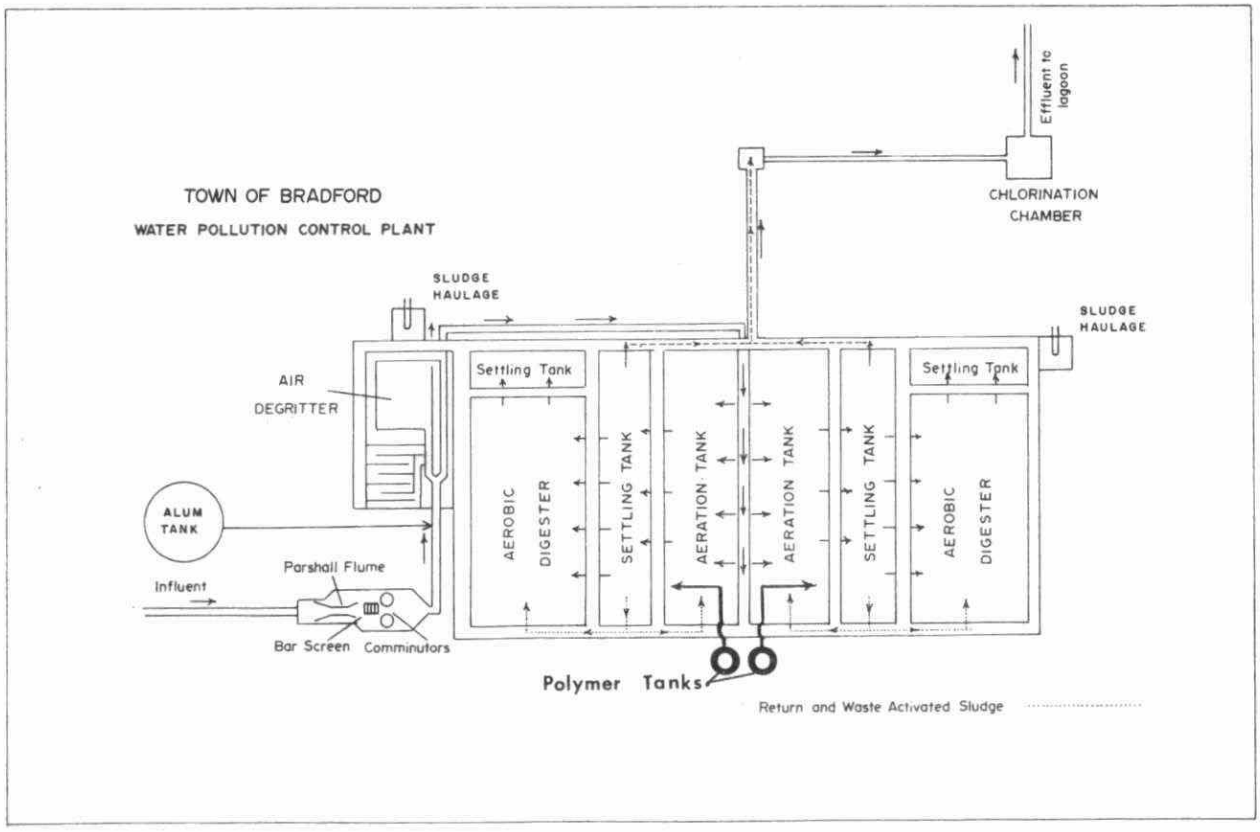
AEROBIC DIGESTERS:
Two, 50' x 32' x 17.5'
Volume: 350,000 I. Gal.

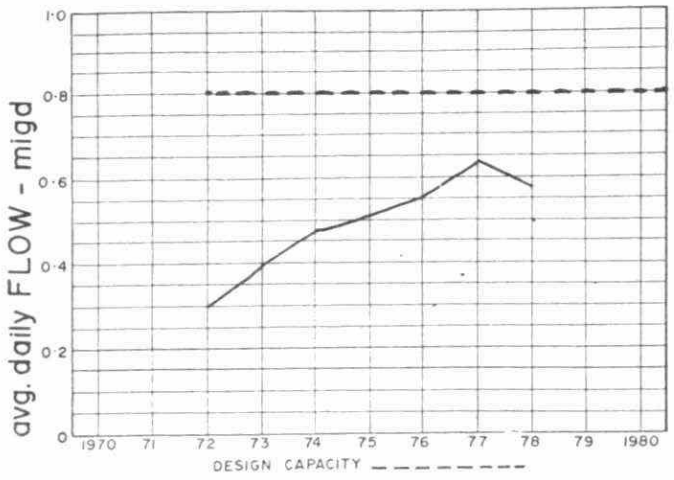
DIGESTER SETTLING TANKS:
Two, 9' x 32' x 9.1'
Volume: 25,000 I. Gal.

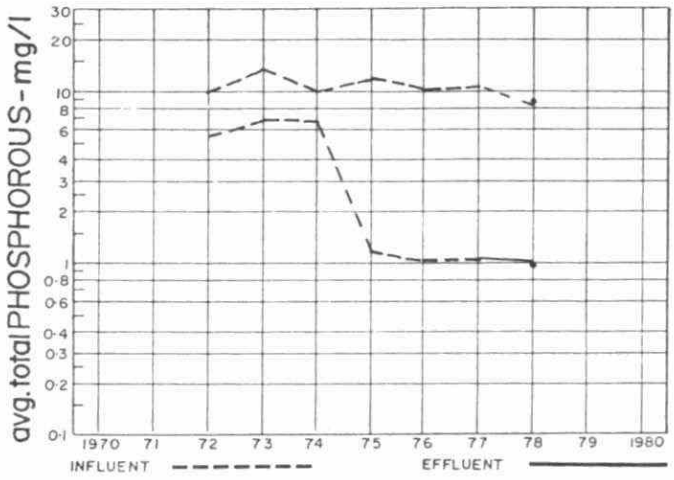
BLOWERS:
Three, Type: Roots Connersville
Size: 2850 cfm at 8.5 psi

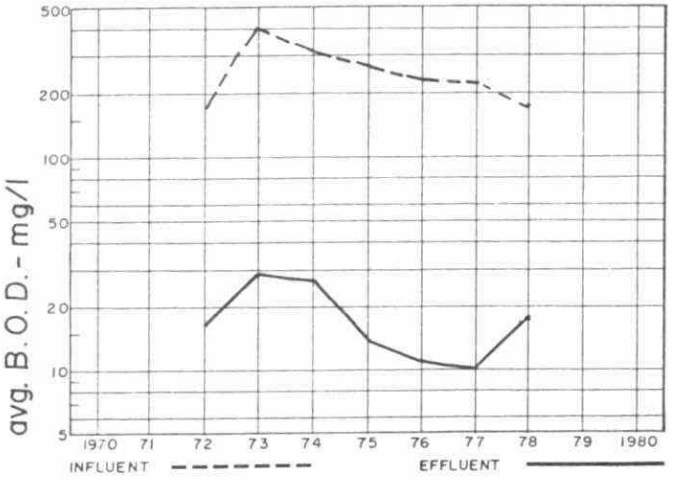
CHLORINATION:
in effluent manhole

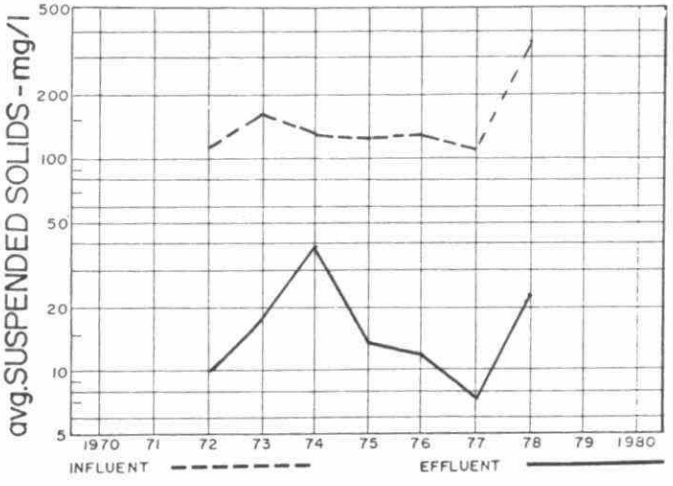
LAGOON
10 acres











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000944 — BRADFORD W P C P

MUNICIPALITY : BRADFORD
REGION : 03 CENTRAL

TREATMENT FACILITY : HIGH RATE
POLISHING LAGOON(S)
PHOSPHORUS REMOVAL

CURRENT POPULATION : 6,913

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.800 MIGD — DESIGN BOD5 : 230.0 MG/L — DESIGN SUSP.SOLIDS : 275.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	17.909	.578	.799	1.800	315.0	8.0	97	54.9	388.0	5.0	98	68.5	14.0	.7	95	2.3
FEB	14.756	.527	.685	1.650	190.0	22.0	88	24.7	190.0	15.0	92	25.8	12.0	3.0	75	1.3
MAR	20.916	.675	1.100	1.960	120.0	4.0	96	24.2	423.0	7.0	98	87.0	6.2	1.3	79	1.0
APR	25.753	.858	1.222	1.940	350.0	25.0	92	83.6	266.0	23.0	91	62.5	13.0	.8	93	3.1
MAY	18.880	.609	.681	1.690	155.0	23.0	85	24.9	467.0	12.0	97	85.9	6.9	.2	97	1.2
JUN	16.206	.540	.647	1.690	155.0	25.0	83	21.0	369.0	10.0	97	58.1	5.9	.4	93	.8
JUL	17.849	.576	.849	1.740	210.0	24.0	88	33.1	327.0	35.0	89	52.1	7.9	1.0	87	1.2
AUG	16.985	.548	.733	1.670	130.0	15.0	88	19.5	432.0	13.0	96	71.1	6.1	.5	91	.9
SEP	15.928	.531	.711	1.960	150.0	11.0	92	22.1	380.0	20.0	94	57.3	5.8	.8	86	.7
OCT	18.523	.598	.706	1.720	160.0	10.0	93	27.7	591.0	9.0	98	107.8	7.2	.6	91	1.2
NOV	13.475	.449	.720	1.580	220.0	26.0	88	26.1	437.0	95.0	78	46.0	8.6	1.0	88	1.0
DEC	15.818	.510	.652	1.760	230.0	28.0	87	31.9	390.0	28.0	92	57.2	9.8	1.6	83	1.2
TOTAL	212.998							393.7				779.3				15.9
AVERAGE		.583	MAXIMUM 1.222	MAXIMUM 1.960	198.7	18.4	90		388.3	22.6	94		8.6	.9	88	
NO. OF SAMPLES					14	12			222	67			12	13		

Ministry of the Environment
Ontario

Southeastern Region
④

REGIONAL OFFICE

KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES

Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

PEMBROKE
OTTAWA
CORNWALL
KINGSTON
BELLEVILLE
Lake Ontario

CARLETON PLACE

PROJECT NO: 1-0009-66
TREATMENT: High Rate Activated Sludge
DESIGN FLOW: 1 2 MIGD
DESIGN BOD: 108 mg/l
DESIGN SS: 126 mg/l

SEWAGE LIFT PUMPS

Type: Chicago Pump
Cap. Three 1050 IGPM @ 23' TDH

PRETREATMENT

1. Coarse Bar Screen, 2" c-c
2. Barminutor, CP model 15C-12 and bypass screen 1" c-c
3. Grit Removal - C. P. Aer-Degritter - Size 10' x 13' x 7' avg (5700 gal)

AERATION SECTION

- Tank Size: two 76' x 10'-9" x 9'-1" (90, 000 gal. total)
- Detention: 1. 8 hr @ 1. 2 mgd
- Air Supply: Three SUTORBILT 1240 cfm
- Diffusers: C. P. FLEXOFUSERS

SETTLING TANKS

Size: Six 25' x 16' hopper bottom tanks in two sets of three (total volume: 125, 000 gal)
Detention: 2. 5 hr @ 1. 2 mgd
Loading: 500 gpd/sq. ft.

CHLORINATION

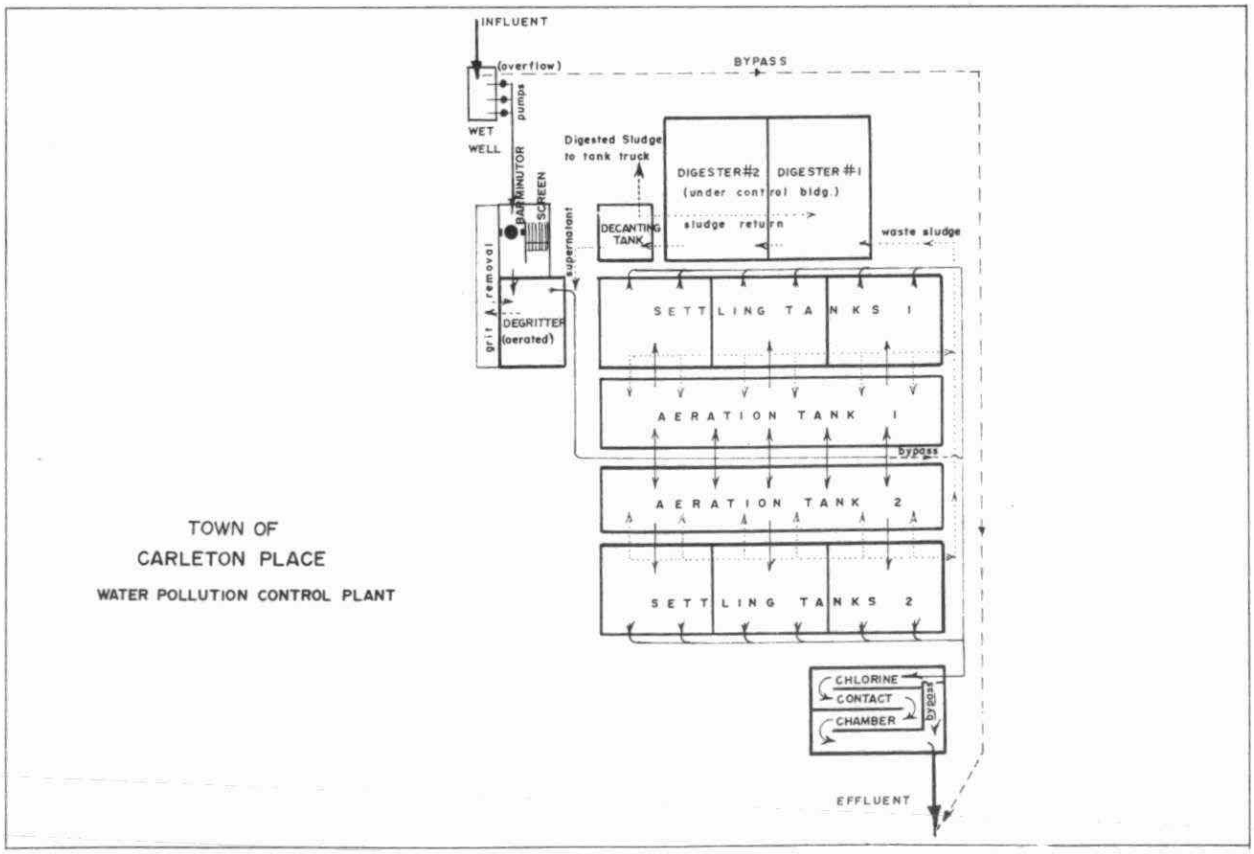
Tank Size: 26' x 20' x 6' (20, 000 gal)
Detention: 24 minutes @ 1. 2 mgd.
Chlorinator: W & T V-800 200 lb/day, flow prop.

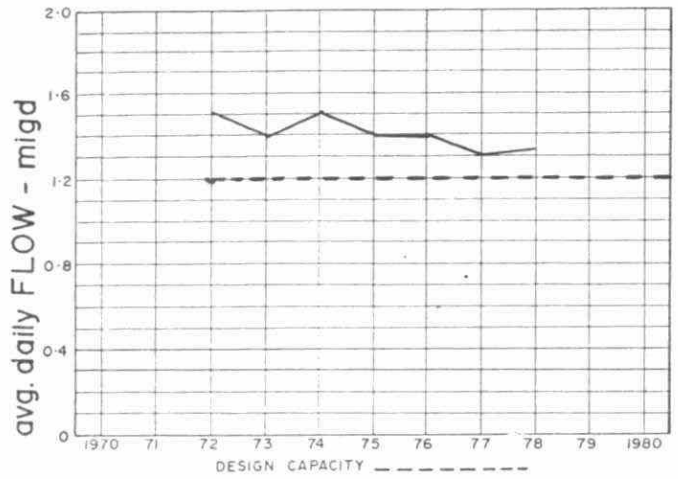
AEROBIC DIGESTER

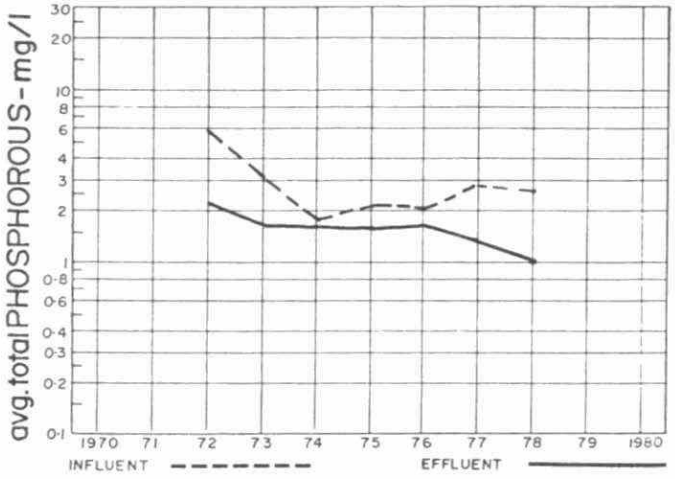
Size: Two 28' x 33'-6" x 12'-8" (160, 000 gal total)

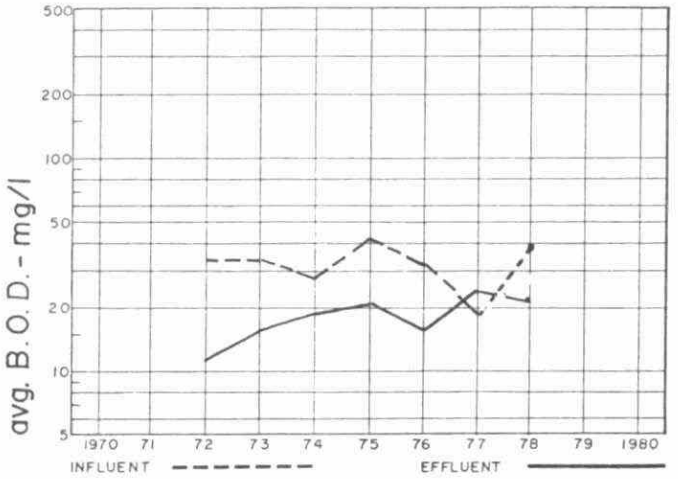
DECANTING TANK

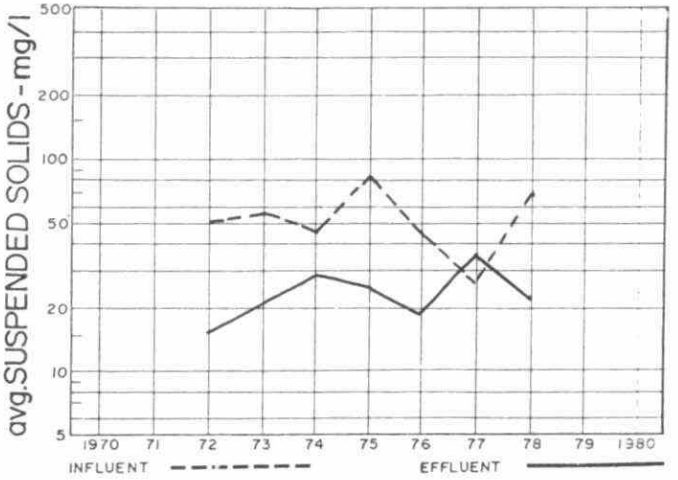
Size: 10' x 10' hopper bottom (4300 gal)











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000971 — CARLETON PLACE WPCP

MUNICIPALITY : CARLETON PLACE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : HIGH RATE
PHOSPHORUS REMOVAL

CURRENT POPULATION : 5,574

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.200 MIGD — DESIGN BOD5 : 108.0 MG/L — DESIGN SUSP.SOLIDS : 126.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	51.200	1.700	2.100	2.200	35.0	40.0	-	-	38.0	79.0	-	-	2.1	1.2	42	.4
FEB	42.700	1.500	1.900	2.400	33.0	22.5	31	4.4	20.0	27.0	-	-	2.8	1.1	60	.7
MAR	42.800	1.400	1.800	2.200	16.0	22.0	-	-	20.0	42.5	-	-	2.7	1.2	55	.6
APR	56.400	1.900	2.200	2.300	9.0	42.5	-	-	19.0	30.0	-	-	3.1	1.3	58	1.0
MAY	41.300	1.330	2.000	2.600	29.0	21.5	25	3.0	28.0	18.0	35	4.1	2.6	1.1	57	.6
JUN	34.200	1.100	1.300	2.500	34.0	14.0	58	6.8	28.0	17.0	39	3.7	2.7	1.0	62	.5
JUL	35.500	1.140	1.400	2.400	40.0	21.0	47	6.7	25.0	13.5	46	4.0	2.9	1.1	62	.6
AUG	38.900	1.250	1.700	2.300	27.0	31.5	-	-	48.0	16.0	66	12.4	2.8	.9	67	.7
SEP	35.000	1.200	2.000	2.800	110.0	25.9	76	29.4	375.0	14.5	96	126.1	2.5	.9	64	.5
OCT	34.300	1.100	1.300	2.500	57.0	9.7	82	16.2	42.0	1.2	97	13.9	2.8	1.0	64	.6
NOV	36.100	1.200	1.500	2.500	55.0	10.5	80	16.0	115.0	26.5	76	31.9	2.9	1.0	65	.6
DEC	44.200	1.430	1.700	2.500	30.0	25.0	16	2.2	50.0	25.0	50	11.0	2.9	1.0	65	.8
TOTAL	492.600							84.7				207.1				7.6
AVERAGE		1.354	MAXIMUM 2.200	MAXIMUM 2.800	39.5	23.8	39		67.3	25.8	61		2.7	1.0	60	
NO. OF SAMPLES					23	23			23	23			233	169		

Ministry of the Environment
Ontario

Northeastern Region
⑤

REGIONAL OFFICE

SUDBURY
199 Larch St.
705-675-4501

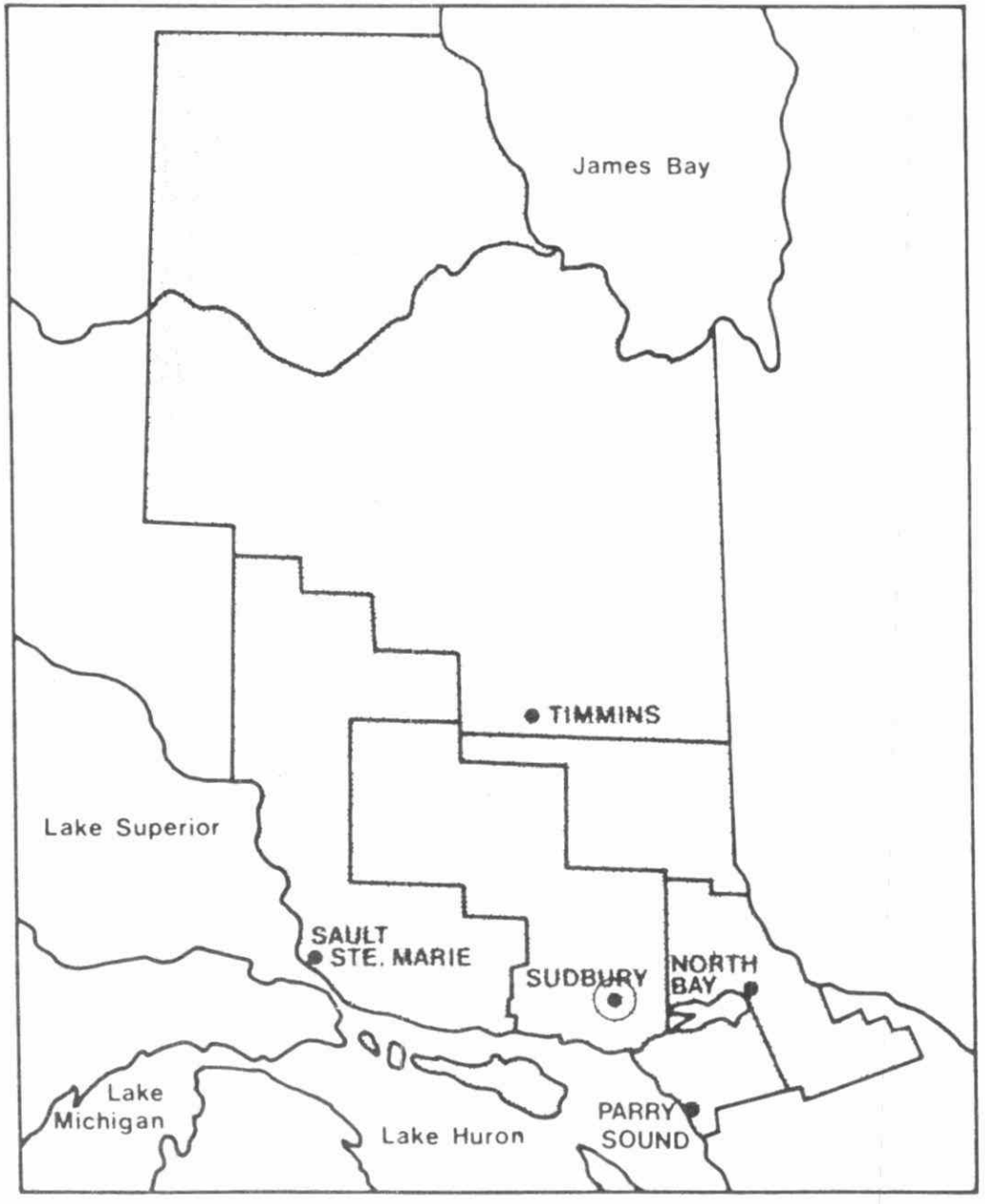
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

SUDBURY

Project Sudbury WPCP
Project No: 2-1002-72
Design Flow: 11.25 MIGD
Design BOD 100.0 MG/L
Design SS 140.0 MG/L

RAW SEWAGE PUMPS
(at pumping station)
Three CANADA PUMPS: Type: 14 DSV,
Capacity: (each) 9000 USGPM at 93' TDH
Two CANADA PUMPS: Type: 10RSLV,
Capacity: 4400 USGPM at 94.5 TDH

BAR SCREENS:
Two, LINK-BELT Mechanical Bar Screens
4' x 6' Bars on 2.5" centres

DETRITOR
30' dia. x 2.2' swd
Type: DORR-OLIVER LONG

RAW SEWAGE PUMPS
(at plant)
Three, WORTHINGTON
Capacity (each) 13,440 USGPM at 28' TDH

AERATION TANKS:
Three, 132.5' x 48' x 15' swd (2-pass)
Volume (total) 1,786,000 I. Gal.
Detention: 2.9 hours
Blowers: Four, SPENCER TURBO
Capacity each: 10,400 ft^3/min. at 8.5 psi

FINAL CLARIFIERS
Four, 110' dia. x 12.5' swd
Mechanism: DORR-OLIVER LONG
Volume: (total) 3,000,000 I. Gal.
Detention: 4.7 hours
Surface overflow rate: 416 gal/ft^2/day

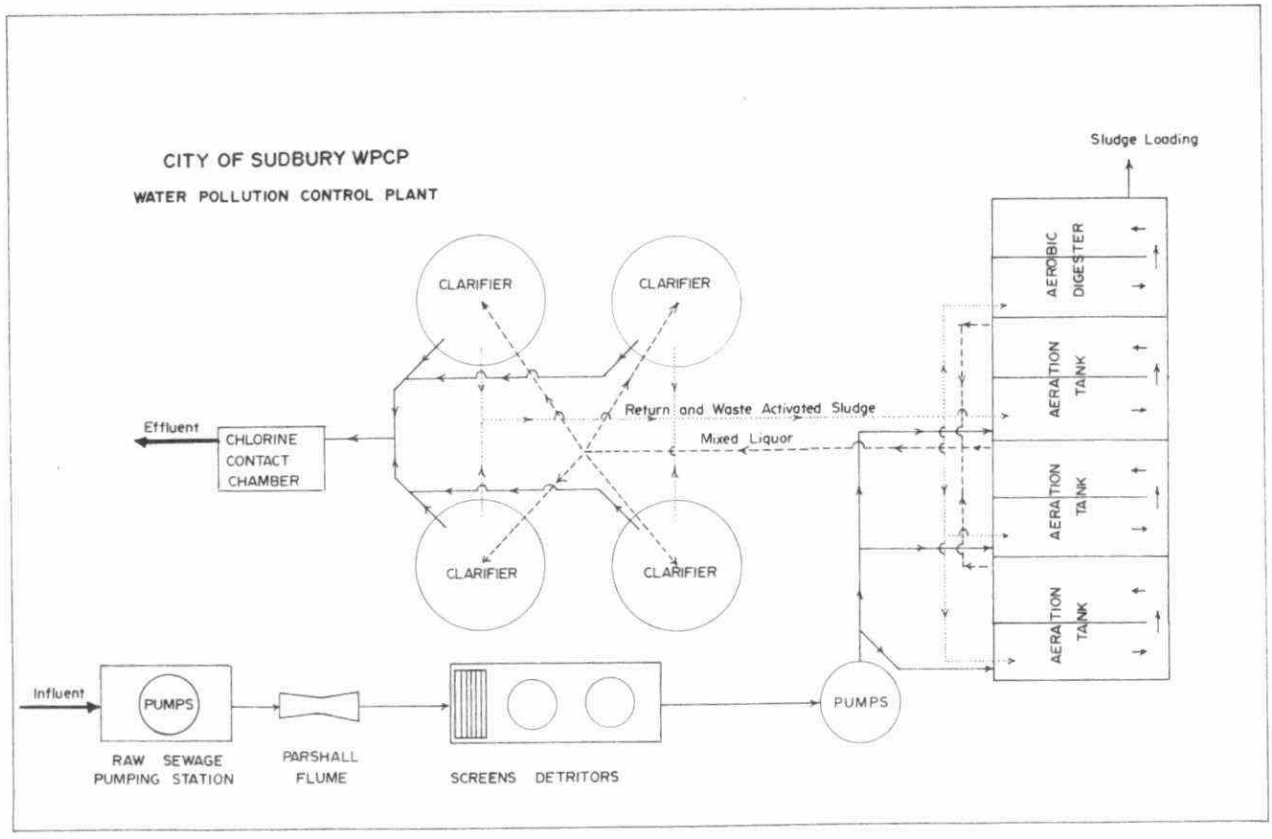
RETURN SLUDGE PUMPS:
Three WORTHINGTON
Capacity (each): 6100 gpm at 51' TDH
One WORTHINGTON
Capacity : 840 gpm at 32' TDH

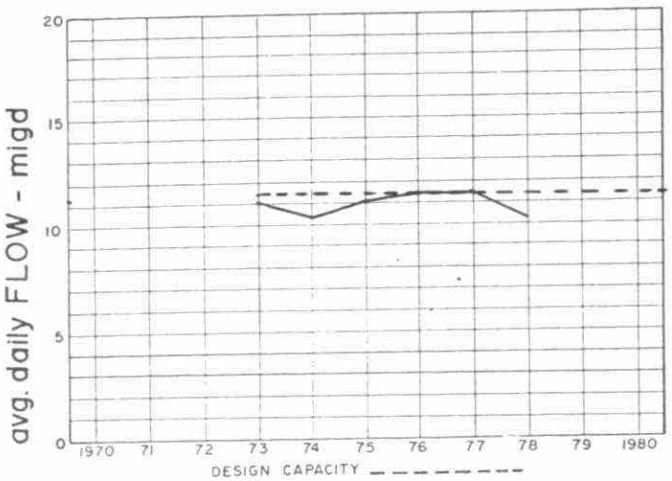
AEROBIC DIGESTER
One, 132.5' x 48' x 15' swd (two-pass)
Volume (total) 595,000 I. Gal.

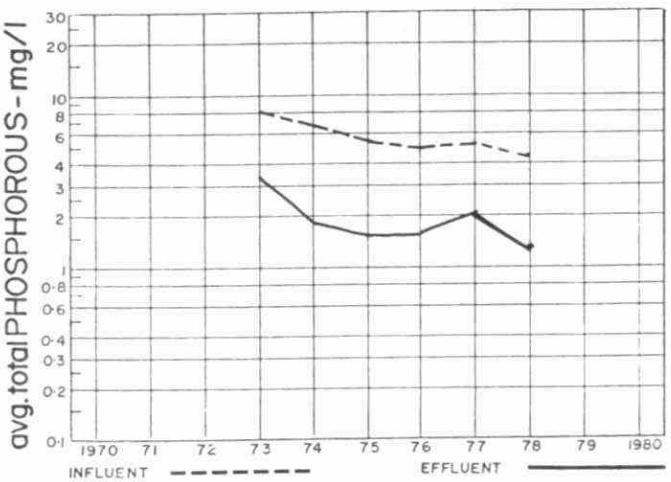
CHLORINATORS:
One, FISHER AND PORTER
Type: 70-4500
Capacity: 8000 lb/day
One, FISHER AND PORTER
Type: 71-V1006
Capacity: 400 lb/day

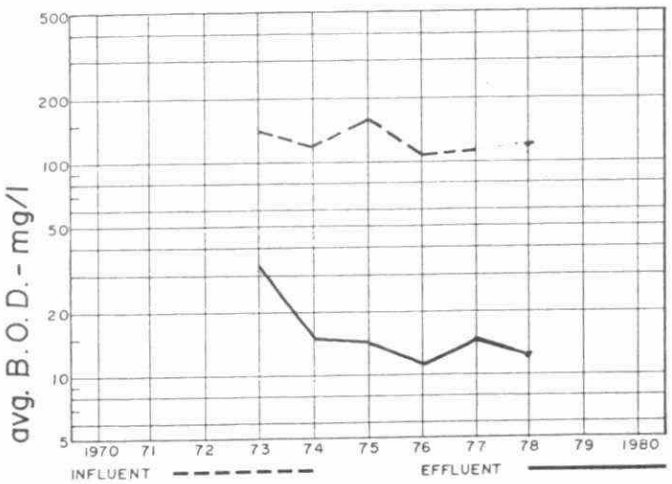
CHLORINE CONTACT CHAMBER:
139' x 30' x 12.5'
Volume: 325,000 I. Gal.

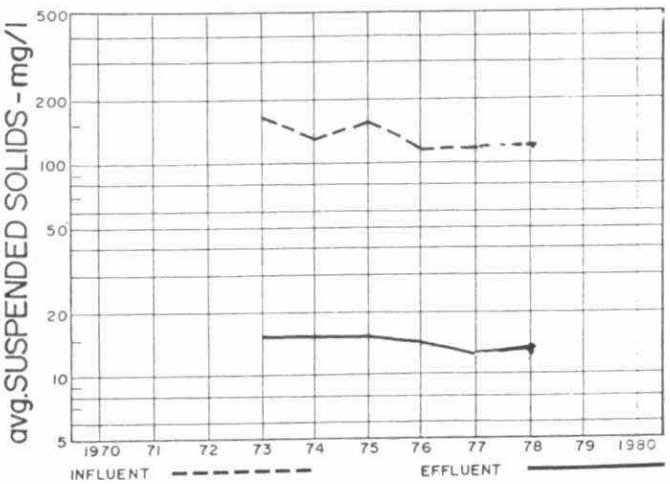
LAGOONS
2, Area: 1 acre











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000711 SUDBURY WPCP

MUNICIPALITY : SUDBURY
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : HIGH RATE

CURRENT POPULATION : 94,206

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 11.250 MIGD DESIGN BOD5 : 100.0 MG/L DESIGN SUSP.SOLIDS : 140.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	219.490	7.080	7.380	15.000	182.0	17.0	90	362.1	135.0	11.2	91	271.7	7.2	1.2	83	13.1
FEB	220.000	7.850	8.300		192.0	13.0	93	393.8	165.0	15.2	90	329.5	5.5	.8	85	10.3
MAR	255.200	8.200	13.800	15.500	128.0	12.0	90	296.0	140.0	14.9	89	319.2	5.5	1.0	81	11.4
APR	486.230	16.208	21.170	30.500	55.0	12.5	77	206.6	73.0	16.4	77	275.2	2.6	1.2	53	6.8
MAY	362.823	11.704	19.249	22.500	120.0	13.0	89	388.2	106.0	12.1	88	340.6	3.5			
JUN	242.824	8.094	9.764	18.500	121.0	11.6	90	265.6	144.0	12.8	91	318.5	5.2			
JUL	266.635	8.601	9.740	26.000	98.0	12.0	87	229.3	134.0	14.0	89	319.9	4.2	2.7	35	4.0
AUG	299.196	9.652	18.750	35.000	108.0	19.5	81	264.7	126.0	12.2	90	340.4	5.0	3.4	32	4.7
SEP	369.965	12.332	22.112	32.000	92.0	15.7	82	282.2	103.0	14.4	86	327.7	3.2	1.4	56	6.6
OCT	411.930	13.288	20.053	25.000	130.0	11.6	91	487.7	130.0	16.0	87	469.6	4.9	.6	87	17.7
NOV	354.490	11.816	15.070	20.000	111.0	15.4	86	338.8	106.0	9.1	91	343.5	3.4	.4	88	10.6
DEC	323.402	10.432	11.636	14.000	133.0	13.7	89	385.8	134.0	12.8	90	391.9	4.9	1.3	73	11.6
TOTAL	3812.185							3900.8				4047.7				96.8
AVERAGE		10.438	MAXIMUM 22.112	MAXIMUM 35.000	122.5	13.9	88		124.6	13.4	89		4.5	1.4	69	
NO. OF SAMPLES					30	30			85	190			12	10		

OXIDATION DITCH TREATMENT PLANTS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
1180 20th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Clinton
c/o Ministry of
Agriculture & Food
519-482-3428

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
WINDSOR
Lake Erie

PAISLEY

PROJECT: Village of Paisley WPCP

PROJECT NO. 1-0101-67

TREATMENT: Oxidation Ditch

NOMINAL FLOW: 0.155 MIGD

BOD - Raw Sewage 264 lb/day

RAW SEWAGE P.S.
Capacity: 0.7 USMGD

COMMINUTOR
Type: Condux SCHQU150-A
Size: 57 rpm

GRIT CHANNELS
Size: Two, each 20'x2'x2.8'swd
Volume (each): 700 I.G.
Retention: (each) 6.5 min.

OXIDATION DITCH
Volume: 122,200 I.G.
Retention: 18.9 hr.

ROTORS
Type: Pumps and Softeners Ltd.
Size: Two, each 8' length x 2.3' dia.

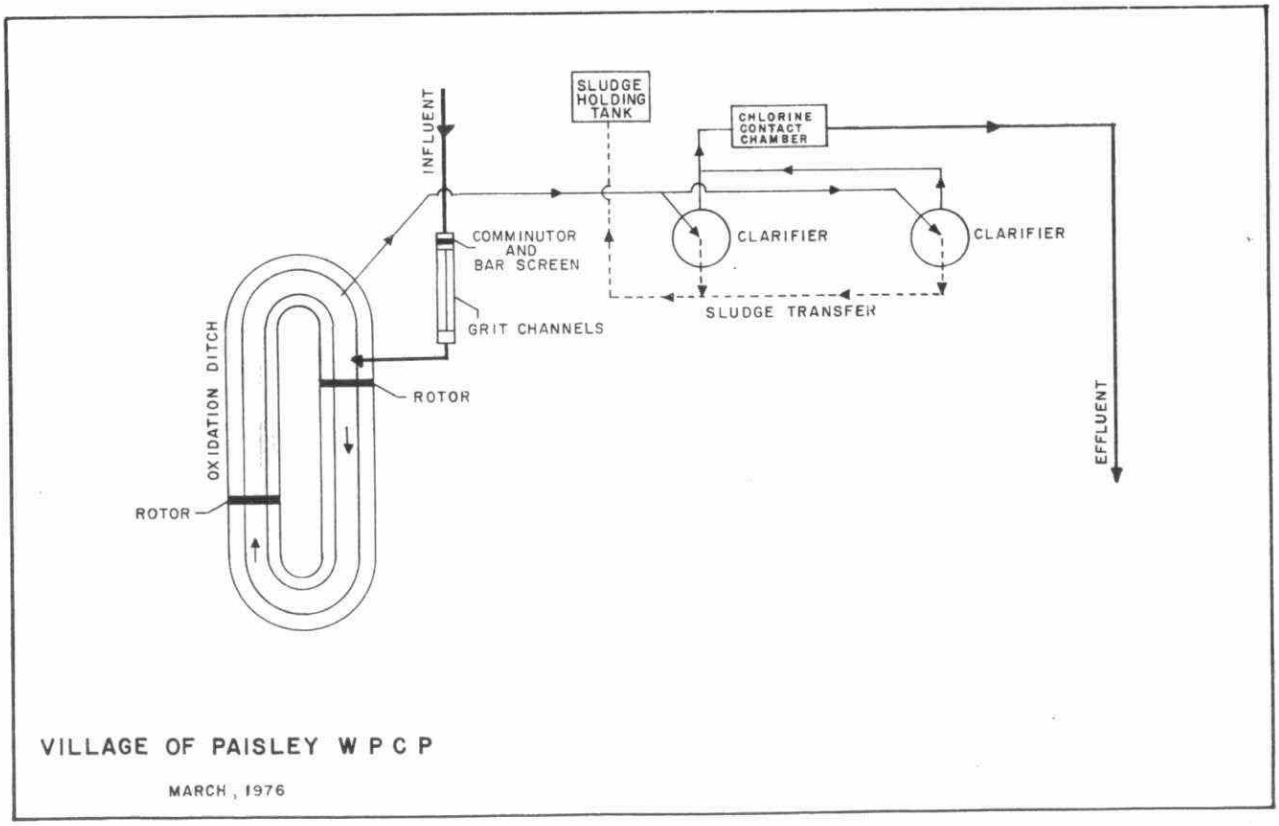
SECONDARY CLARIFIERS
Type: Two, circular
Size: each 24' dia x 10' swd
Volume (total): 56,500 I.G.
Retention (total): 8.7 hr
Loading:
- Surface: 340 IG/ft^2/day
- Weir: 1033 IG/ft/day

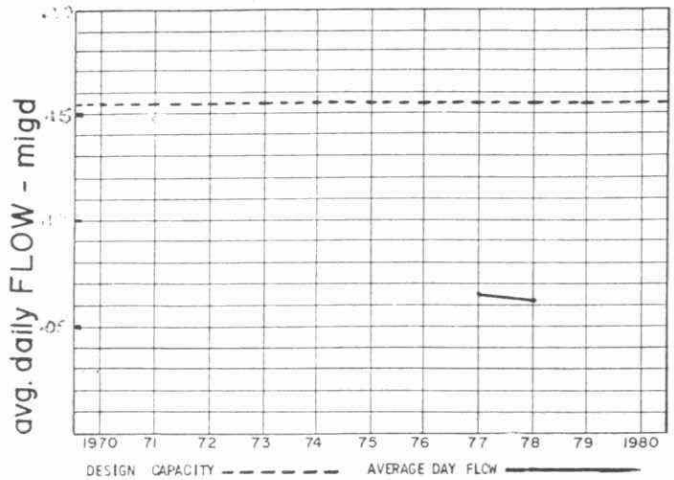
SLUDGE PUMPS
Type: Two, each 163 USGPM @ 15'TDH

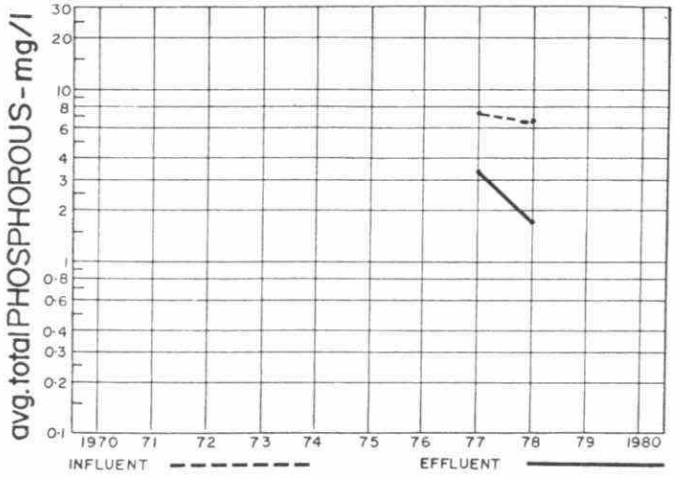
CHLORINATION CHAMBER
Volume: 2845 I.G.
Retention: 26 min.

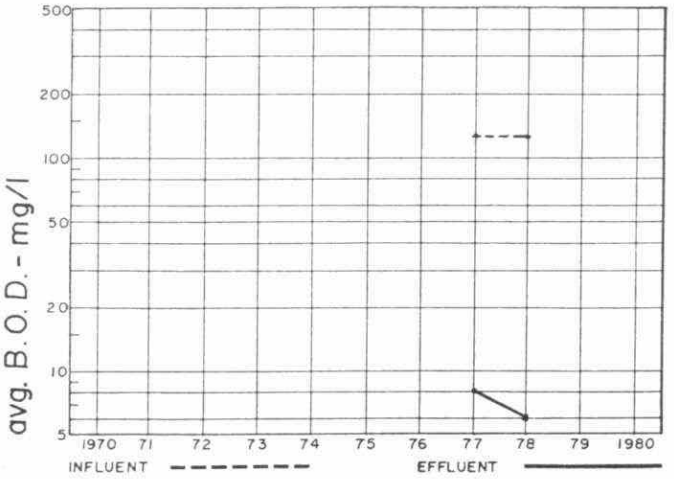
CHLORINATOR
Type: F and P
Capacity: 40 lb/day

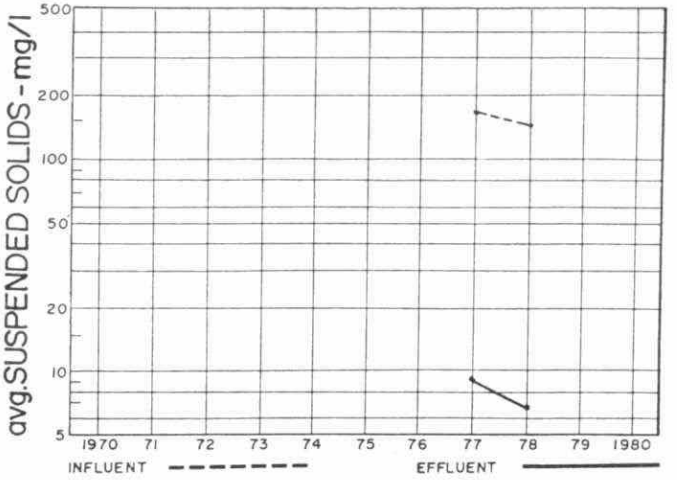
SLUDGE HOLDING TANK
Size: 17'x10'x12' awd
Volume: 11,000 I.G.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001907 PAISLEY WPCP

MUNICIPALITY : PAISLEY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,067

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.155 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 170.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.103	.068	.082		123.0	33.0	73	1.8	194.0	20.0	89	3.6	7.1	2.9	59	
FEB	1.683	.060	.071		144.0	6.0	95	2.3	118.0	13.0	88	1.7	5.0	3.4	32	
MAR	2.191	.071	.122		130.0	5.0	96	2.7	153.0	4.0	97	3.2	5.0	3.0	40	
APR	2.428	.081			95.0	5.2	94	2.1	118.0	2.5	97	2.8	6.8	2.0	70	.1
MAY	1.720	.055			111.0	2.8	97	1.8	93.0	1.8	98	1.5	5.8	4.1	29	
JUN	1.540	.051	.079		150.0	1.2	99	2.2	139.0	7.0	94	2.0	10.2	1.2	88	.1
JUL	1.500	.048	.061		126.0	2.3	98	1.8	308.0	2.8	99	4.5	6.2	1.5	75	
AUG	1.874	.060	.072		160.0	1.6	99	2.9	159.0	4.8	96	2.8	9.9	1.2	87	.1
SEP	2.012	.067	.116		71.0	2.9	95	1.3	61.0	2.0	96	1.1	5.1	.8	84	
OCT	2.094	.068	.088		89.0	3.8	95	1.7	82.0	8.7	89	1.5	6.6	.7	89	.1
NOV	1.660	.055	.076		112.0	3.4	96	1.8	128.0	5.8	95	2.0	7.8	.6	92	.1
DEC	2.070	.067	.131		157.0	5.7	96	3.1	216.0	8.0	96	4.3	7.2	.7	90	.1
TOTAL	22.875							25.5				31.0				.6
AVERAGE		.063	MAXIMUM .131	MAXIMUM	122.3	6.0	95		147.4	6.7	95		6.8	1.8	73	
NO. OF SAMPLES					22	22			22	22			22	22		

SOUTHAMPTON

PROJECT: Town of Southampton WPCP
PROJECT NO: 1-0027-66
TREATMENT: Oxidation Ditch
DESIGN CAPACITIES: Winter - 0.29 MIGD
Summer - 0.67 MIGD

DESIGN POPULATION: Summer- 6700
Winter- 2900

BOD - RAW SEWAGE: Winter-493 lb/day
Summer-950 lb/day

PUMPING STATIONS

P.S. NO. 1
PUMPS
Type: variable-speed
Size: two each 1825 USGPM @ 108' TDH

SCREENING
Type: Bar screen (manually cleaned)
Gravity overflow

P.S. NO. 2
PUMPS
Type: FLYGT Submersible
Size: Two, each 750 USGPM @ 37' TDH

P.S. NO. 3
PUMPS
Type: FLYGT Submersible
Size: Two, each 250 USGPM @ 73' TDH

PRETREATMENT

SCREENING
Bar Screen (manually cleaned)

COMMINUTION
Size: 16" dia
Motor: 3 HP

BIOLOGICAL TREATMENT

OXIDATION DITCHES
Two, Volume (each) 290,000 I.G.
Retentions: winter (1 ditch): 24 hr
summer (2 ditches): 20.8 hr

AERATORS (1 per ditch)
Size: two, each 27.5" dia x 20' l
Motors: 25 HP

FINAL SEDIMENTATION TANKS
Size: Two, each 14' x 48' x 12' awl
Volume(total): 100,000 I.G.
Retentions: winter (1 tank): 4.2 hr
summer (2 tanks): 3.6 hr
Loadings: surface-winter (1 tank):
430 IGPD/ft^2
summer-(2 tanks) 500 IGPD/ft^2

Weir:-winter (1 tank)
4,000 IGPD/lin ft
summer (2 tanks)
4620 IGPD/lin ft

RETURN ACTIVATED SLUDGE PUMPS

Type: Centrifugal
Size: Two, each 550 USGPM @ 25' TDH

CHLORINATION

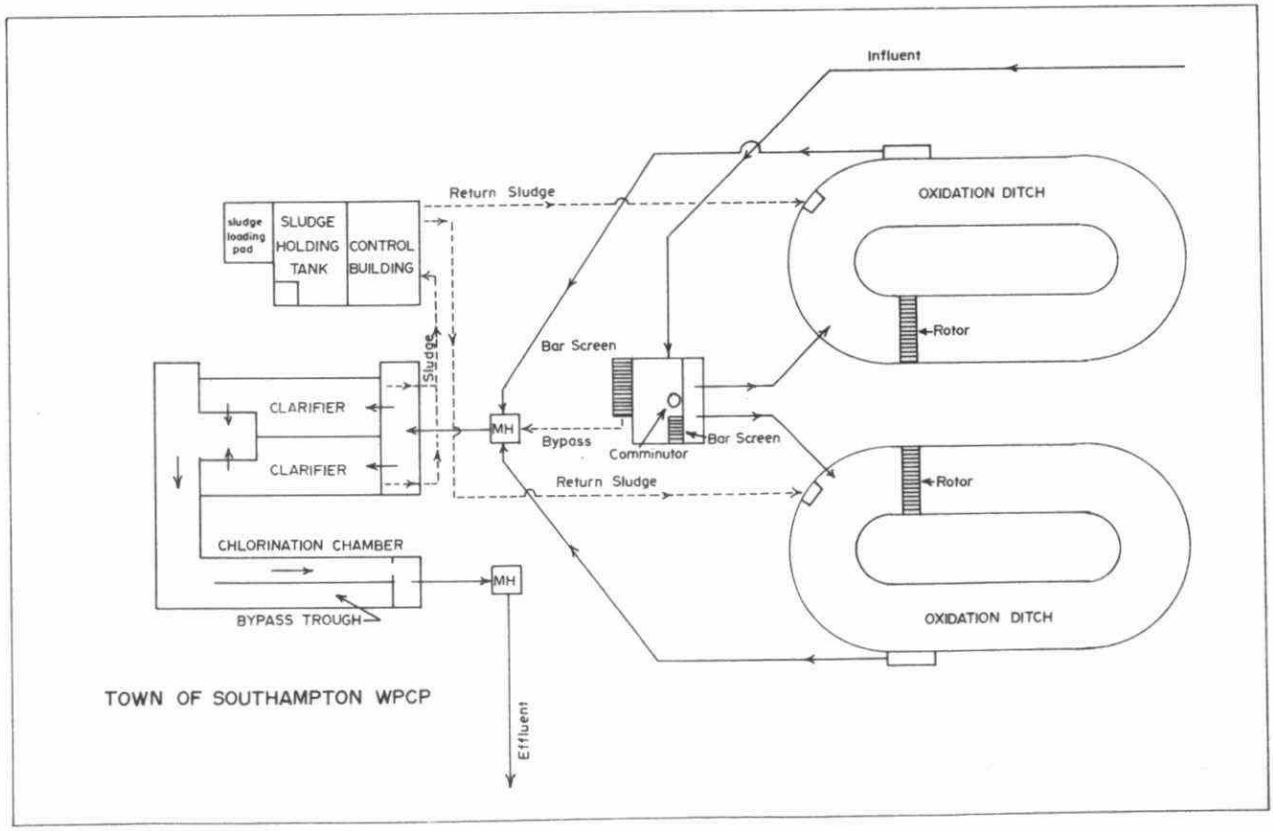
CHLORINE CONTACT CHAMBER
Size: One, 6' x 48' x 9' awl
Volume: 16,200 I.G.
Retentions: winter (@ 0.29 MIGD) 80 min
summer (@ 0.67 MIGD) 35 min

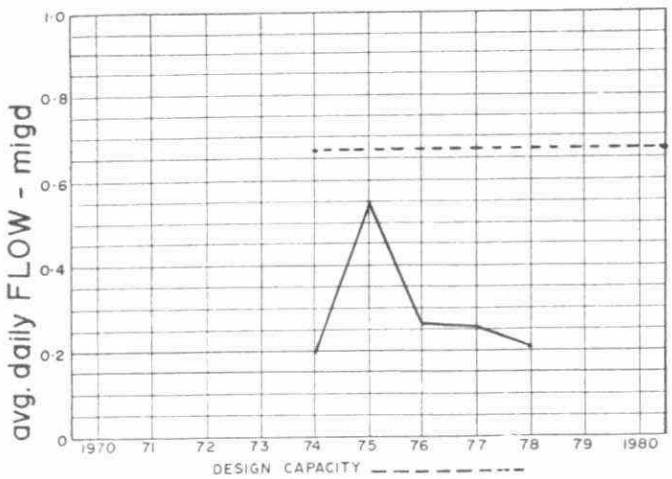
SLUDGE HANDLING

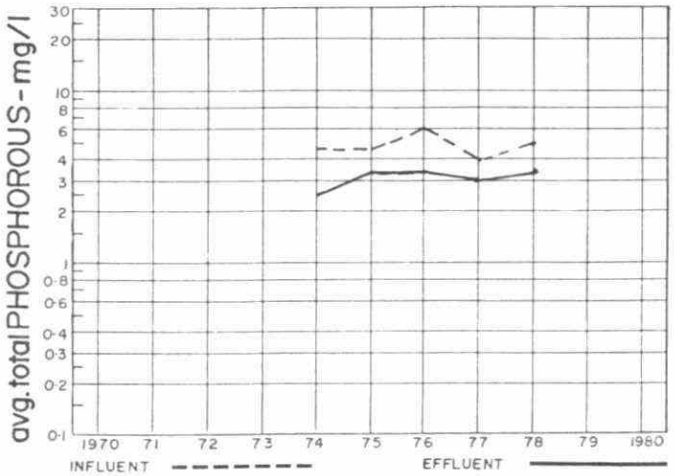
SLUDGE HOLDING TANK
Size: One, 21' x 30' x 11' awl
Volume: 6,700 ft^3
Loading: winter-2.31 ft^3/ cap.
summer-1.00 ft^3/cap.

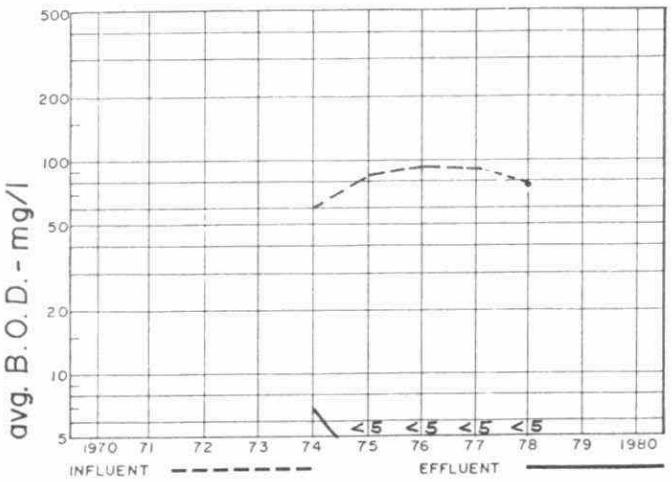
SLUDGE PUMP
Type: Duplex plunger
Size: One, 200 USGPM @ 40' TDH

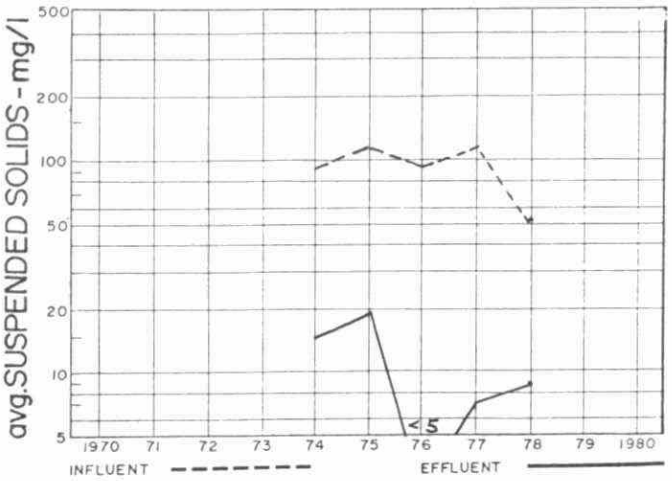
SLUDGE AERATION
Size: One, 270 cfm @ 7.0 PSIG
Motor: 10 HP, 1150 rpm











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001453 — SOUTHAMPTON WPCP

MUNICIPALITY : SOUTHAMPTON
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : OXIDATION DITCH

CURRENT POPULATION : 2,748

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.670 MIGD — DESIGN BOD5 : 140.0 MG/L — DESIGN SUSP.SOLIDS : 140.0 MG/L

	* FLOW DATA				BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				TOTAL PHOSPHORUS			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.900	.190	.740	.740	89.0	3.0	96	5.0	103.0	8.0	92	5.6	3.9	2.5	35	
FEB	5.270	.190	.200	.700	62.0	4.0	93	3.0	68.0	8.0	88	3.1	4.8	2.8	41	.1
MAR	7.030	.230	.310	.790	62.0	2.0	96	4.2	48.0	8.0	83	2.8	2.8	2.5	10	
APR	8.464	.282	.357	.920	58.0	3.7	93	4.5	38.0	9.0	76	2.4	3.9	2.6	33	.1
MAY	7.128	.230	.303	.800	79.0	3.6	95	5.3	44.0	10.0	77	2.4	4.2	3.3	21	
JUN	5.962	.199	.333	.780	77.0	1.2	98	4.5	33.0	10.0	69	1.3	8.3	4.4	46	.2
JUL	6.598	.213	.236	.660	96.0	1.3	98	6.2	34.0	10.0	70	1.5	7.6	5.0	34	.1
AUG	6.306	.203	.259	.740	96.0	1.2	98	5.9	54.0	8.0	85	2.9	7.0	4.8	31	.1
SEP	5.913	.197	.276	.800	62.0	2.0	96	3.5	36.0	10.0	72	1.5	4.0	4.8	-	-
OCT	6.227	.201	.235	.700	141.0	1.4	99	8.6	73.0	7.8	89	4.0	5.5	3.0	45	.1
NOV	5.335	.178	.216	.680	73.0	2.2	96	3.7	68.0	8.5	87	3.1	4.8	3.1	35	
DEC	6.815	.220	.258	.820	59.0	2.6	95	3.8	45.0	7.3	83	2.5	3.4	2.2	35	
TOTAL	76.948							58.2				33.1				.7
AVERAGE		.211	MAXIMUM .740	MAXIMUM .920	79.5	2.3	97		53.6	8.7	83		5.0	3.4	31	
NO. OF SAMPLES					58	27			64	60			25	27		

Ministry of the Environment
Ontario

West Central Region
②

REGIONAL OFFICE
STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES
Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

GRAND VALLEY

PROJECT: Village of Grand Valley WPCP

PROJECT NO. 1-0018-66

TREATMENT: Oxidation Ditch

DESIGN FLOW: 0.132MGD

BOD - 200 mg/l

SS - 200 mg/l

RAW SEWAGE PUMPING:
2, FLYGT CP100 Size: 370 IGPM at 27' TDH

GRIT CHANNELS:
2, each 43' x 2'w x 2' swd
Volume (each) 1073 I.G. Detention: 12 min.
Bar screens in GRIT chamber

OXIDATION DITCH:
Length 159' Design water level 4.5'
Volume: 130,000 I.G. Detention: 24 hours
Rotor Type: Pumps and Softners
Size: 27.5" dia. x 10' length
Motor: $7\frac{1}{2}$ HP 1750 rpm

CLARIFIER:
18' dia. x 10.25' swd
Volume: 16,280 I.G. Detention: 3.0 hours
Collector mechanism type 'DORR-OLIVER-LONG'

SLUDGE PUMPS:
2 Type: CRANE DEMING
Size - 150 USGPM at 11' TDH

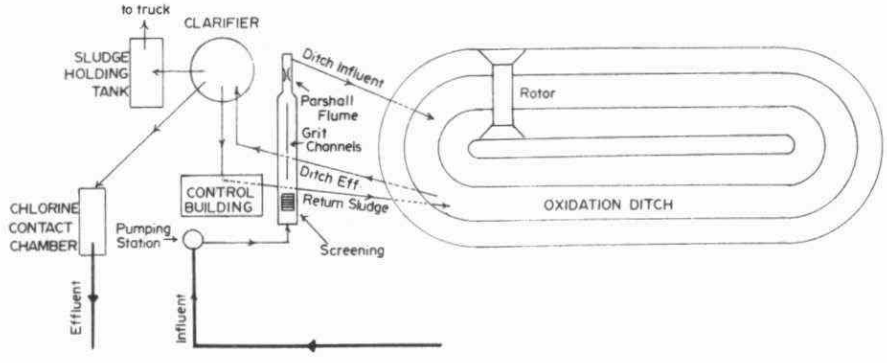
SLUDGE HOLDING TANK:
12' x 8' x 9.5' swd
Volume: 5242 IG Detention: 58 min.

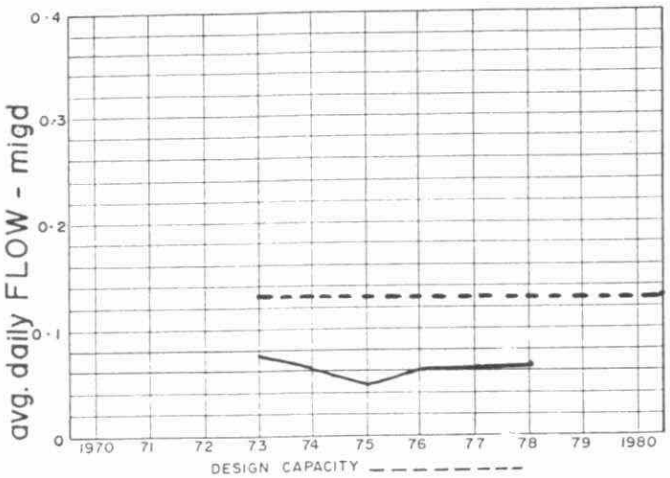
CHLORINE CONTACT CHAMBER:
19' x 6' x 5' swd (5-passes)
Volume: (total) 2691 I.G. Detention: 30 min.

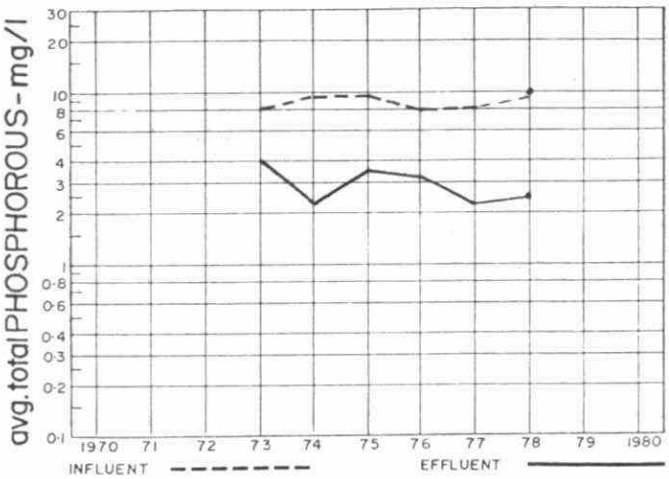
CHLORINATOR:
BIF Hypochlorinator
Capacity 11 USGPD at 125 psi

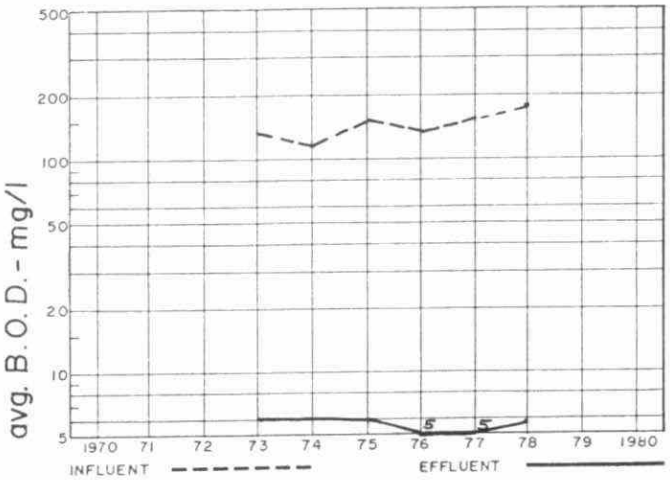
GRAND VALLEY

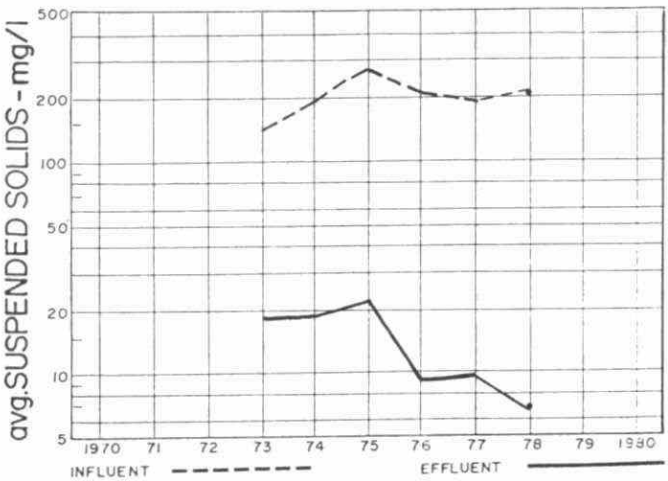
WATER POLLUTION CONTROL PLANT











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000301 GRAND VALLEY WPCP

MUNICIPALITY : GRAND VALLEY
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,160

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.132 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.408	.045	.158		170.0	19.0	88	2.1	264.0	10.0	96	3.5	11.5	3.9	66	.1
FEB	1.125	.040	.045		165.0	7.0	95	1.7	196.0	9.0	95	2.1	11.0	3.3	70	
MAR	1.744	.056	.114		158.0	6.0	96	2.6	230.0	6.0	97	3.9	10.9	3.6	66	.1
APR	5.957	.198	.399		62.0	4.9	92	3.4	87.0	12.0	86	4.4	4.9	1.2	75	.2
MAY	3.046	.098	.188		73.0	11.0	84	1.8	105.0	13.5	87	2.7	5.1	1.6	68	.1
JUN	1.458	.048	.060		190.0	6.5	96	2.6	225.0	6.4	97	3.1	12.5	2.8	77	.1
JUL	1.155	.037	.045		225.0	2.7	98	2.5	240.0	7.5	96	2.6	13.0	3.5	73	.1
AUG	1.122	.036	.046		252.0	1.5	99	2.8	289.0	4.2	98	3.1	13.0	2.3	82	.1
SEP	1.379	.045	.105		190.0	1.8	99	2.5	240.0	2.1	99	3.2	9.8	2.5	74	.1
OCT	1.347	.043	.060		153.0	2.2	98	2.0	175.0	2.5	98	2.3	10.4	2.2	78	.1
NOV	1.435	.047	.063		165.0	2.2	98	2.3	202.0	4.0	98	2.8	8.1	1.9	76	
DEC	1.793	.057	.111		110.0	6.0	94	1.8	167.0	7.5	95	2.8	9.7	2.1	78	.1
TOTAL	22.969							28.1				36.5				1.1
AVERAGE		.063	MAXIMUM .399	MAXIMUM	159.4	5.9	96		201.6	7.0	96		9.9	2.5	74	
NO. OF SAMPLES					25	25			48	52			24	25		

WOOLWICH (ST. JACOBS)

PROJECT: Woolwich Twp (St. Jacogs) WPCP

PROJECT NO. 1-0063-67

TREATMENT: Oxidation Ditch

DESIGN FLOW: 0.21 MGD

BOD - 200 mg/l

SS - 200 mg/l

RAW SEWAGE PUMPING:
Two, Type: FLYGT CP-3150
Size: 600 USGPM at 24' TDH

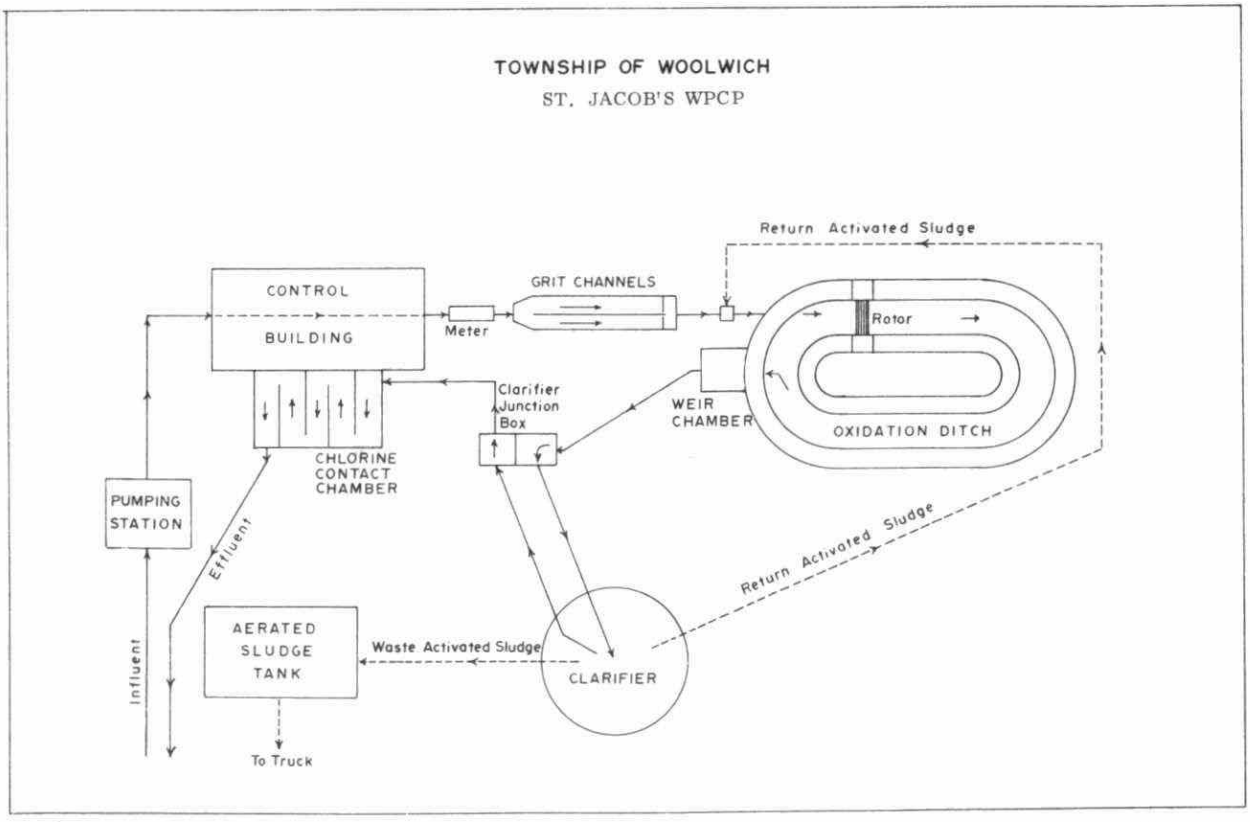
GRIT CHANNELS:
Two, 19' x 1.6' x 2.2'
Volume (each) 420 I. Gal.
Detention: (each) 2.8 min.

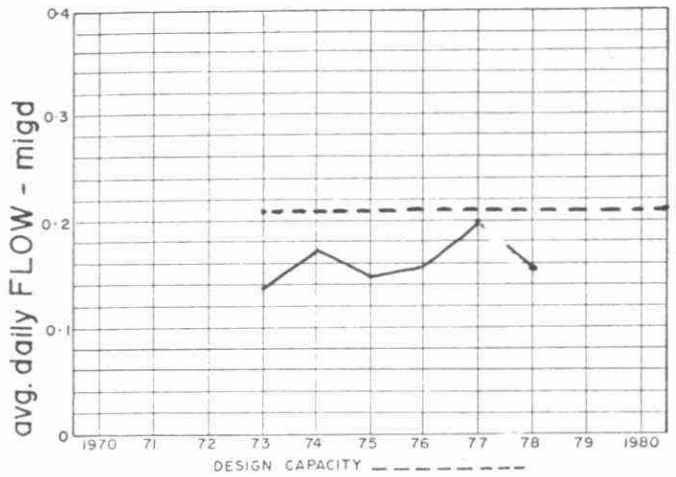
OXIDATION DITCH:
Volume: 200,000 I. Gal.
WL Dept. 5' Detention: 22.8 hours

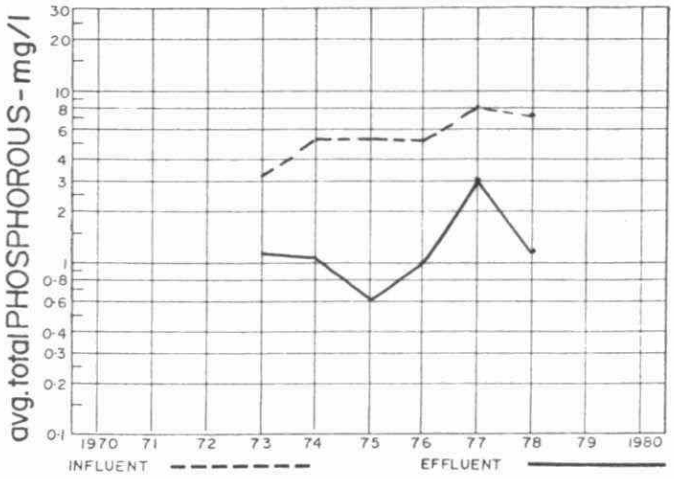
Rotor - Type: Pumps and Softners
Size: 15' length (2)

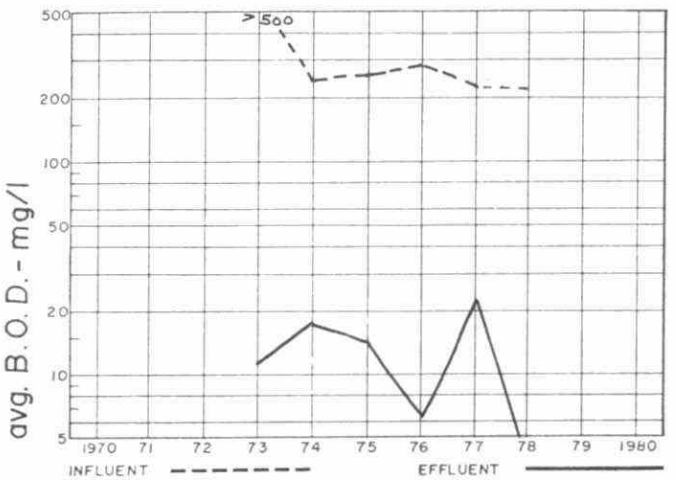
CLARIFIER:
24' dia. x 9.5' swd
Volume: 27,000 I. Gal.
Detention: 3.1 hours
Mechanism: DORR OLIVER LONG
Overflow Rate: 465 gpd/sq. ft.

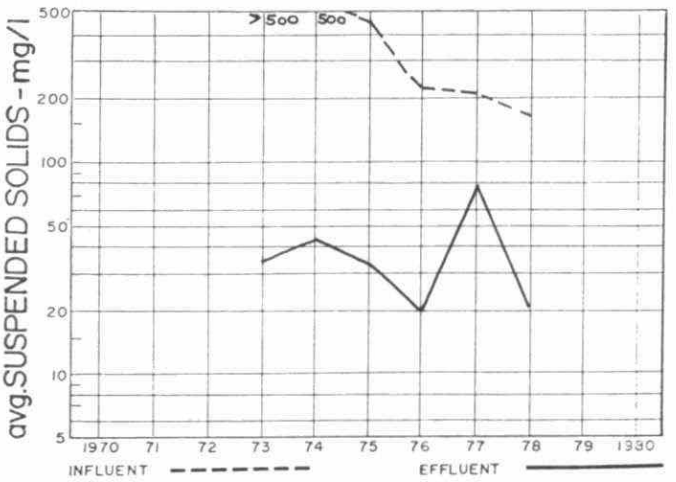
CHLORINE CONTACT CHAMBER:
5 passes, each 12.3' x 2.5' x 5' awl
Volume: 4,800 I. Gal.
Detention: 33 min.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001211 — ST JACOBS POLICE VILLAGE PLANT

MUNICIPALITY : WOOLWICH (ST. JACOBS)
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 16,392

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.210 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.410	.218	.605		70.0	10.0	85	4.4	135.0	21.0	84	8.4	5.6	2.1	62	.2
FEB	3.380	.120	.160		183.0	10.8	94	5.8	177.0	64.0	63	3.8	6.8	1.7	75	.1
MAR	5.853	.189	.379		210.0	6.5	96	11.9	145.0	20.0	86	7.3	10.3	1.1	89	.5
APR	10.910	.263	.510		60.0	4.7	92	6.0	102.0	23.0	77	8.6	3.6	.7	80	.3
MAY	6.336	.204	.351		40.0	3.3	91	2.3	90.0	13.0	85	4.8	4.8	1.2	75	.2
JUN	4.188	.139	.244		126.0	6.3	95	5.0	114.0	13.8	87	4.1	8.8	.3	96	.3
JUL	3.391	.109	.150		140.0	6.0	95	4.5	144.0	14.2	90	4.4	13.0	2.6	80	.3
AUG	3.242	.105	.177		185.0	1.6	99	5.9	245.0	17.5	92	7.3	8.2			
SEP	4.602	.153	.336		740.0	3.0	99	33.9	256.0	22.0	91	10.7	8.5	3.4	60	.2
OCT	4.327	.139	.258		280.0	4.8	98	11.9	175.0	13.3	92	6.9	5.6	1.0	82	.1
NOV	3.682	.122	.155		210.0	1.0	99	7.6	269.0	11.5	95	9.4	7.6	.2	97	.2
DEC	3.791	.122	.198		173.0	1.6	99	6.4	136.0	8.4	93	4.8	6.7	.5	92	.2
TOTAL	61.112							105.6				80.5				2.6
AVERAGE		.157	MAXIMUM .605	MAXIMUM	201.4	4.9	97		165.6	20.1	87		7.4	1.3	81	
NO. OF SAMPLES					23	22			48	49			22	20		

Ministry of the Environment
Ontario

Central Region

③

REGIONAL OFFICE

DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES

Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE

Huntsville
100 Main St. E.
705-789-2386

Georgian
Bay
GRAVENHURST
BARRIE
PETERBOROUGH
TORONTO
OAKVILLE
Lake Ontario

FENELON FALLS

PROJECT: Fenelon Falls WPCP

PROJECT NO. 1-0095-67

TREATMENT: Oxidation Ditch

DESIGN FLOW: 0.22 MIGD

BOD - Raw Sewage - 200 mg/l

SS - Raw Sewage - 250 mg/l

FRANCES ST. P.S.
Pumps:
Type: Two, submersibles
Size: each 83 IGPM

OAK ST. P.S.
Pumps:
Type: Two, submersibles
Size: each 375 IGPM

MAIN (PLANT) P.S.
Pumps:
Type: Three MORSE centrifugal
Size: each 550 IGPM

GRIT CHANNELS
Size: Two, each 21.75'x2'x1.5'awd
Volume(each): 407 I.G.
Retention(each: 2.7 min

COMMINUTOR
Size: 10-inch

Bar screen/in bypass channel

OXIDATION DITCH

Width: 18' (at top)
Length: centres 100' apart

ROTOR
Type: pumps and softeners
Size: 14'x2.3' dia.

FINAL CLARIFIER
Type: one, circular
Sixe: 30' i.d. x 10' awd
Volume: 45,600 I.G.
Retention: 5.0 hr
Loadings:
- Surface: 311 IG/ft^2/day
- Weir: 2340 I.G./ft/day

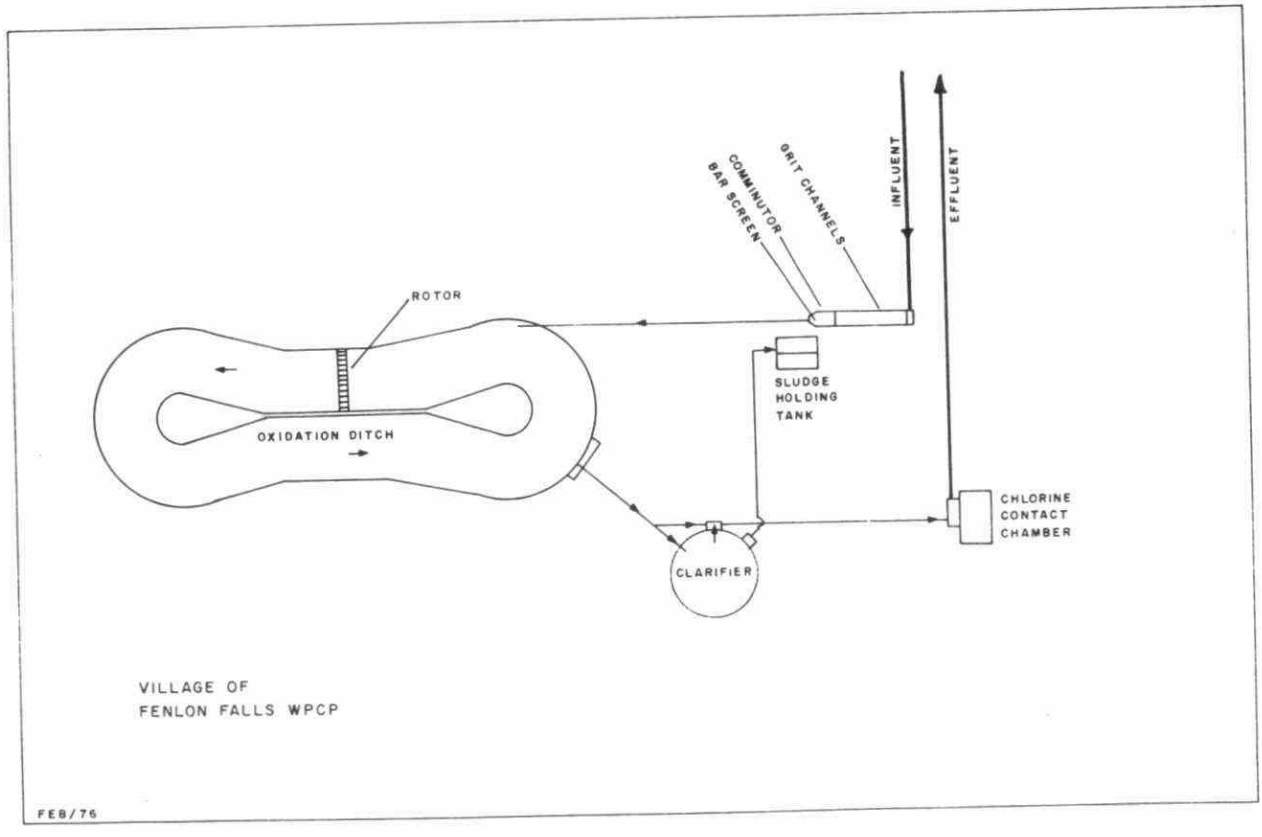
CHLORINE CONTACT CHAMBER
Size: one, 10'x15.5'x5.25'awd
Volume: 5100 I.G.
Retention: 33 min.

SLUDGE TRANSFER PUMP
Type: one, A.S.Leitch
Size: 214 gpm @ 46' TDH

SLUDGE HOLDING TANK
Type: two, rectangular
Size: each 12'x5'x9'awd
Volume: each 3370 I.G.

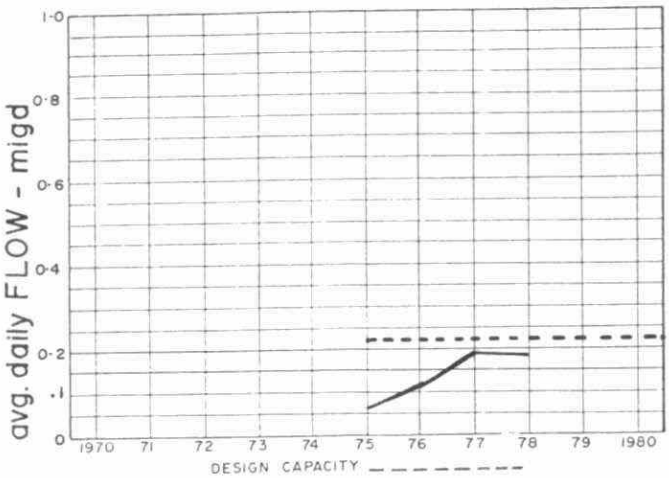
BLOWER
Type: one Utility Technology
Size: 44 cfm @ 6 psi

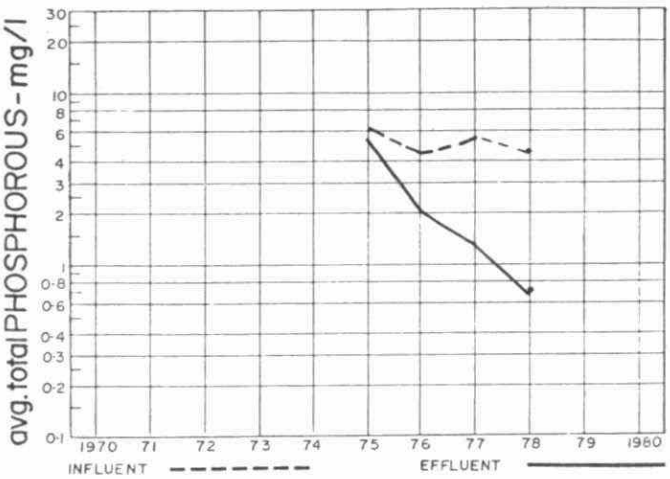
ALUM STORAGE TANK
Capacity: 5000 gal.

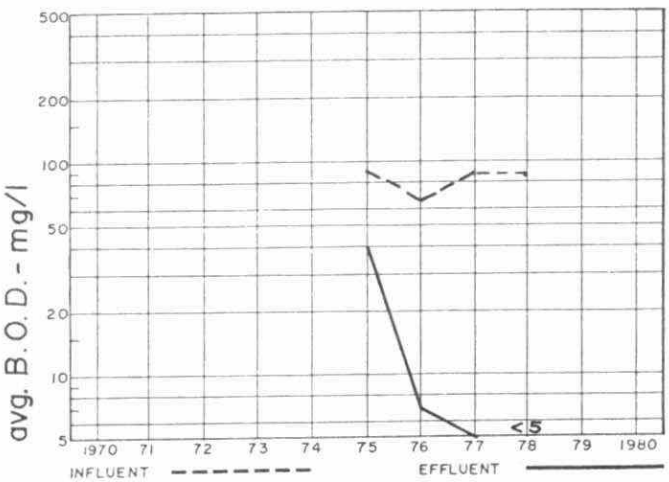


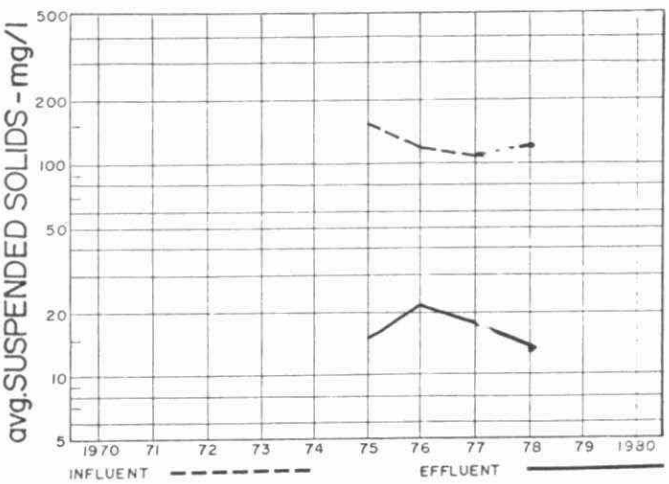
VILLAGE OF
FENLON FALLS WPCP

FEB/76









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001612 — FENELON FALLS WPCP

MUNICIPALITY : FENELON FALLS
REGION : 03 CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,627

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.220 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.531	.178	.243	.496	62.0	12.0	80	2.7	54.0	21.0	61	1.8	4.0	1.8	55	.1
FEB	4.534	.162	.195	.496	90.0	4.0	95	3.8	113.0	23.0	79	4.0	5.0	.6	88	.1
MAR	6.141	.199	.379	.590	75.0	5.0	93	4.2	216.0	20.0	90	12.0	4.2	.7	83	.2
APR	9.884	.329	.515	.748	92.0	5.0	94	8.5	146.0	11.0	92	13.3	4.9	.5	89	.4
MAY	7.391	.238	.364	.636	46.0	3.5	92	3.1	113.0	9.9	91	7.6	3.3	.7	78	.1
JUN	5.047	.168	.200	.505	114.0	2.6	97	5.6	125.0	11.0	91	5.7	5.9	.6	89	.2
JUL	5.051	.163	.185	.534	130.0	3.2	97	6.4	142.0	9.0	93	6.7	5.7	.6	89	.2
AUG	5.300	.170	.210	.552	32.0	1.2	96	1.6	50.0	5.0	90	2.3	4.3	.8	81	.1
SEP	5.065	.169	.206	.534	60.0	2.0	96	2.9	75.0	9.0	88	3.3	4.2	.5	88	.1
OCT	5.124	.159	.250	.496	95.0	3.0	96	4.7	130.0	10.0	92	6.1	6.2	1.4	77	.2
NOV	4.839	.161	.218	.515	80.0	2.0	97	3.7	90.0	11.0	87	3.8	4.8	.8	83	.1
DEC	4.991	.161	.254	.505	150.0	6.0	96	7.1	70.0	13.0	81	2.8	3.9	.3	92	.1
TOTAL	68.898							54.3				69.4				1.9
AVERAGE		.188	MAXIMUM .515	MAXIMUM .748	85.5	4.1	95		110.3	12.7	88		4.7	.7	83	
NO. OF SAMPLES					34	34			34	34			32	27		

HASTINGS

PROJECT Village of Hastings

PROJECT NO. 1-0084-76

TREATMENT: Oxidation Ditch

DESIGN FLOW 0.233 MGD

PRIMARY TREATMENT

Screening
Bar Screen with 2" x $\frac{1}{4}$" bars @ 1"c/c

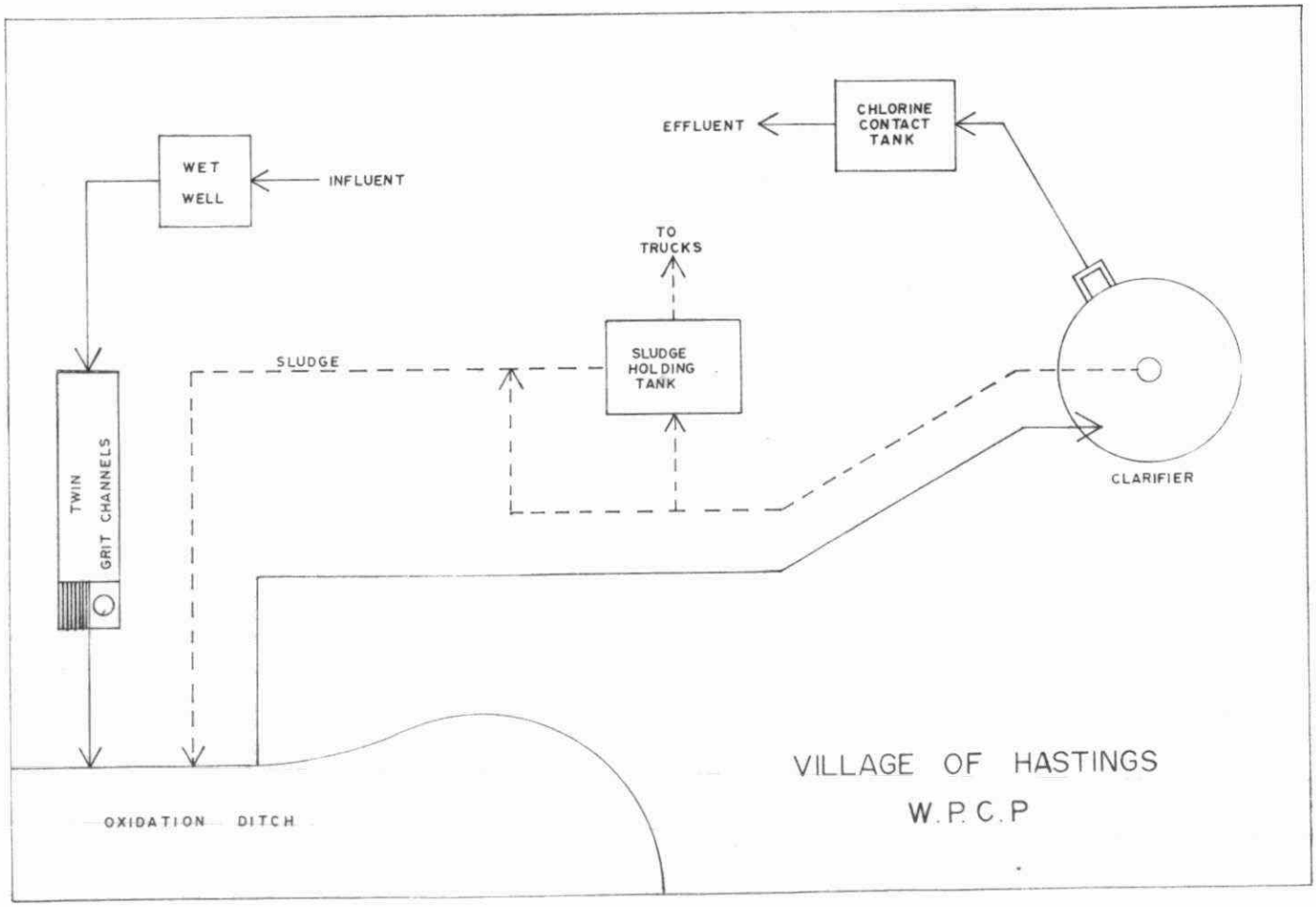
Grit Removal
2 Grit tanks 1.5' x 22' x 1.4' deep.

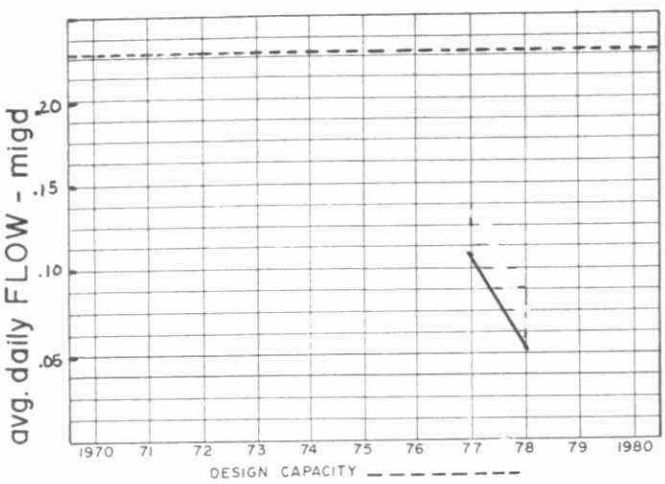
SECONDARY TREATMENT

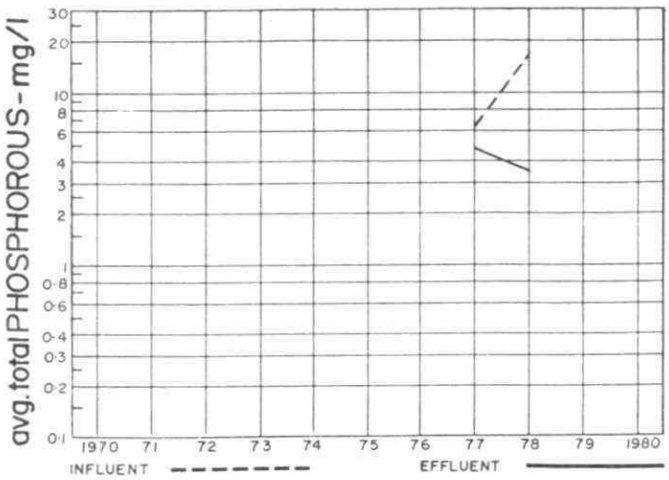
Oxidation Ditch
Volume: 62,400 ft.^{3}
Detention: 40 hrs.
Motors: 3 - 20 hp. @ 90 rpm.
Cage Rotor: 27$\frac{1}{2}$" dia. x 60' long.

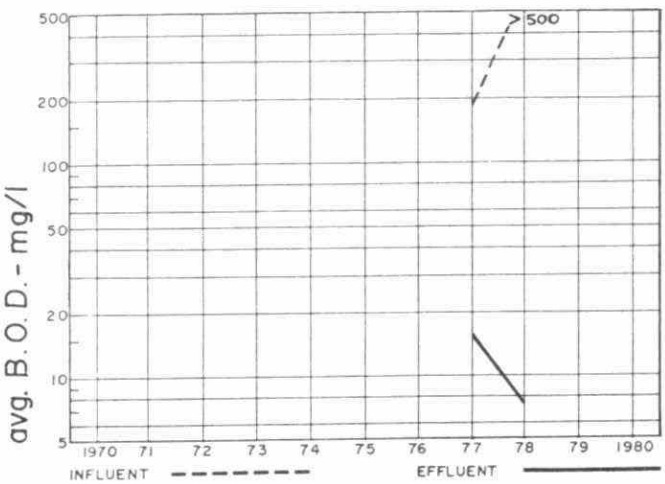
Clarifier
Size: 29' dia. x 10'SWD
Loading: Surface = 350 gpd/ft^2
Weir = 2560 gpd/ft

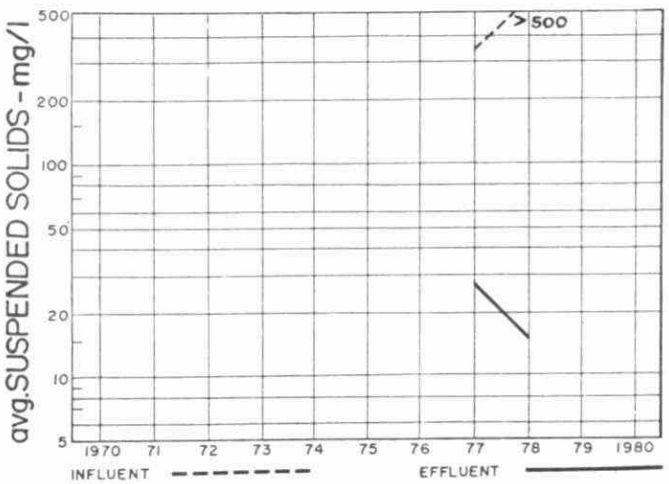
Sludge Handling
Storage Volume: 4760 ft.^{3}
Blower: 95 cfm @ 6 psi.
20 cfm/1000 ft.^{3}











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001827 — HASTINGS WPCP — * NO. DATA AVAILABLE

MUNICIPALITY : HASTINGS
REGION : 03 CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 951

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.233 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.635	.085	.120	.210	65.0	6.0	90	1.5	6.0	19.0	-	-	3.2	1.6	50	
FEB	1.820	.065	.089	.306	670.0	4.0	99	12.1	2195.0	18.0	99	39.6	38.5	2.6	93	.6
MAR	3.453	.111	.254	.473	680.0	11.0	98	23.1	1190.0	47.0	96	39.4	36.0	8.1	77	.9
APR	*	*			*	*			*	*			*	*		
MAY	*	*			*	*			*	*			*	*		
JUN	1.230	.040	.061		*	*			*	*			*	*		
JUL	.831	.030	.055		1400.0	3.5	99	11.6	750.0	.7	99	6.2	*	1.1		
AUG	1.464	.039	.112		120.0	7.5	93	1.6	265.0	10.0	96	3.7	6.9	2.1	69	
SEP	.896	.030	.078		190.0	1.6	99	1.6	300.0	6.0	98	2.6	16.0	3.4	78	.1
OCT	1.279	.041	.073		460.0	1.8	99	5.8	425.0	6.0	98	5.3	11.0	3.4	69	
NOV	1.330	.044	.083	.028	1040.0	14.0	98	13.6	865.0	20.0	97	11.2	19.0	8.2	56	.1
DEC	1.250	.040	.062		350.0	16.0	95	4.1	360.0	*			14.0	*		
TOTAL	16.188							75.0				108.0				1.7
AVERAGE		.053	MAXIMUM .254	MAXIMUM .473	552.7	7.2	98		706.2	15.8	97		18.0	3.8	78	
NO. OF SAMPLES					10	10			10	9			8	39		

NORWOOD

PROJECT: Village of Norwood WPCP

PROJECT NO. 1-0125-67

DESIGN FLOW: 0.12 MIGD

DESIGN POPULATION: 1500

BOD - Raw Sewage - 200 mg/l

SS - Raw Sewage - 250 mg/l

RAW SEWAGE PUMPS
Type: Two, Pacific CB0330
Size: (each) 487 USGPM

COMMINUTOR:
Type: Heligear HTM1
Size: 10-inch

GRIT CHANNELS
Size: Two, 1.25'x18'x1'awd
Volume (each): 140 I.G.
Retention (one): 1.3 hr

OXIDATION DITCH
Volume: 118,000 I.G.
Retention:17.7 hrs

ROTOR
Type: Pumps and Softeners
Size: 27.5" dia x 10.2'1

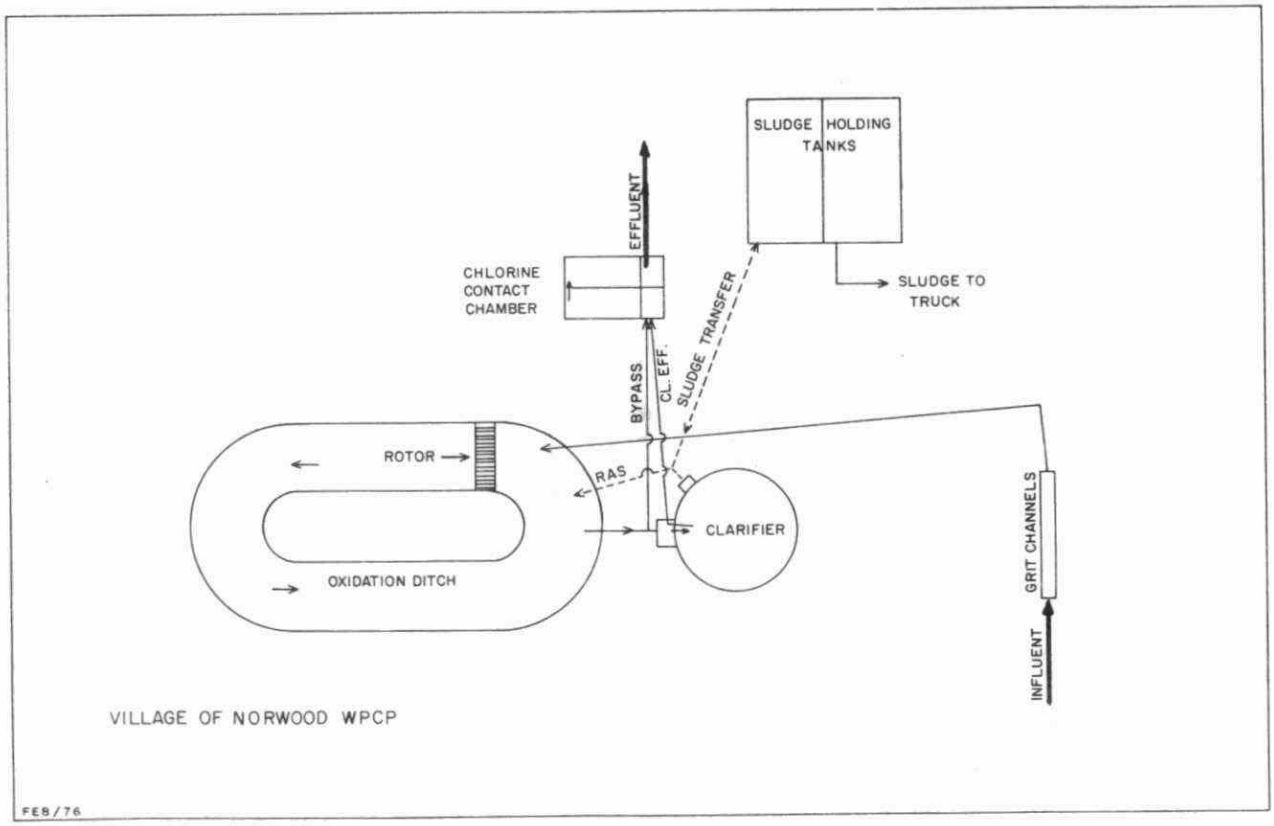
CLARIFIER
Size: One, 21'i.d. x 9.1'awd
Volume: 19,700 I.G.
Retention: 3.0 hr

SLUDGE TRAMSFER PUMP
Type: One carter 800 D
Size: 159 gpm

CHLORINE CONTACT CHAMBER
Type: Two-pass
Size: each pass 9.7' x 4.4' x 5.9' awd
Volume (total): 3100 I.G.
Retention: 30 min.

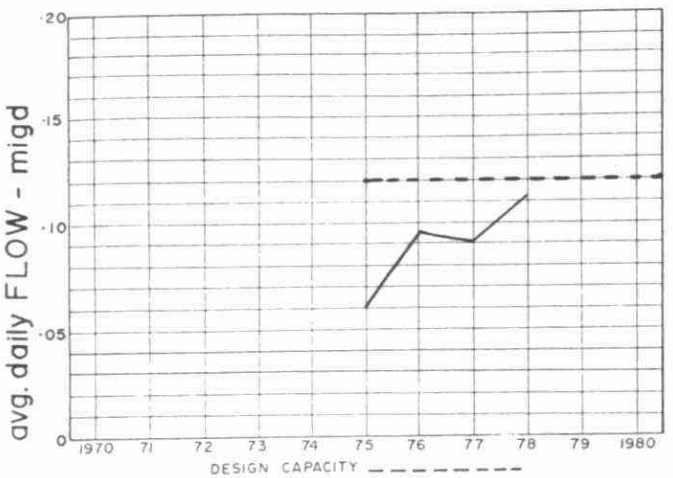
SLUDGE HOLDING TANKS
Size: Two, 35'x17.5' x 8' awd
Volume (total): 61,100 I.G.

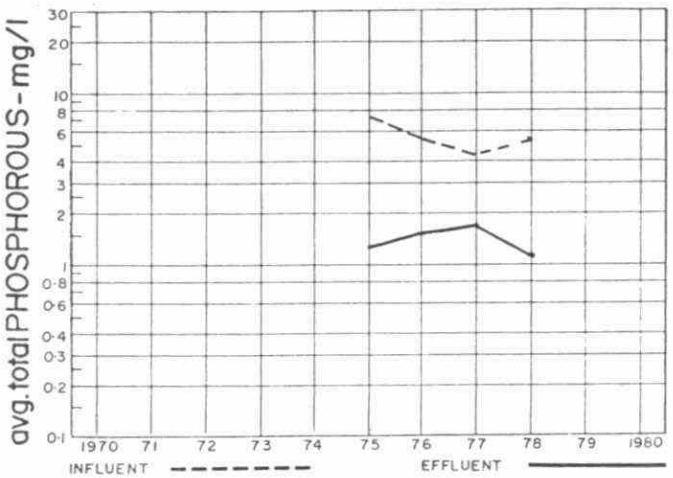
BLOWER
Type: One Gatx DA105
Size: 10 HP

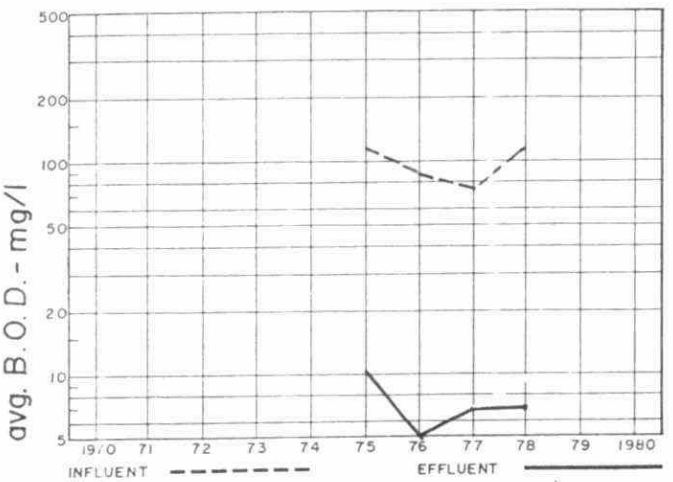


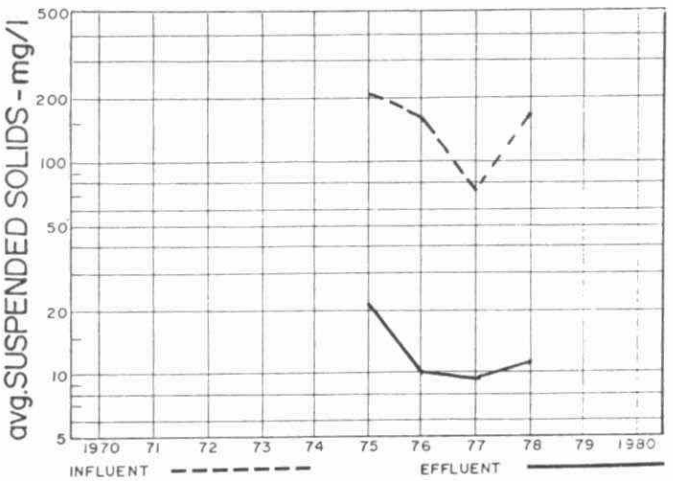
VILLAGE OF NORWOOD WPCP

FEB/76









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110001499 NORWOOD WPCP

MUNICIPALITY : NORWOOD
REGION : 03 CENTRAL

TREATMENT FACILITY : OXIDATION DITCH
PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,288

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.120 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP. SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.328	.107	.117	.456	138.0	15.0	89	4.0	145.0	23.0	84	4.0	6.5	1.4	78	.1
FEB	2.940	.105	.106	.456	140.0	1.0	99	4.0	275.0	19.0	93	7.5	5.2	1.0	80	.1
MAR	3.170	.102	.139	.456	115.0	6.0	94	3.4	125.0	15.0	88	3.4	5.5	1.4	74	.1
APR	7.831	.261			38.0	4.0	89	2.6	145.0	10.0	93	10.5	1.9	.6	68	.1
MAY	5.776	.186			56.0	3.7	93	3.0	49.0	6.0	87	2.4	2.4	.6	75	.1
JUN	3.263	.109			180.0	2.5	98	5.7	260.0	.5	99	8.4	8.6	1.2	86	.2
JUL	2.352	.076			180.0	17.5	90	3.8	165.0	7.0	95	3.7	7.2	1.3	81	.1
AUG	2.219	.071	.095	.456	34.0	6.7	80	.6	50.0	10.5	79	.8	1.9	1.3	31	
SEP	2.370	.077	.097	.480	113.0	4.2	96	2.5	127.0	10.5	91	2.7	6.0	2.2	63	
OCT	2.518	.081	.090	.470	85.0	1.0	98	2.1	200.0	5.0	97	4.9	7.4	1.2	83	.1
NOV	2.514	.083	.098	.456	145.0	10.3	92	3.3	180.0	9.0	95	4.2	7.4	1.6	78	.1
DEC	2.471	.080	.086	.470	180.0	11.8	93	4.1	245.0	15.0	93	5.6	9.3	1.2	87	.2
TOTAL	40.752							39.1				58.1				1.2
AVERAGE		.112	MAXIMUM .139	MAXIMUM .480	117.0	6.9	94		163.8	10.8	93		5.7	1.2	78	
NO. OF SAMPLES					17	17			16	18			17	18		

Ministry of the Environment
Ontario

Northeastern Region
⑤

REGIONAL OFFICE

SUDBURY
199 Larch St.
705-675-4501

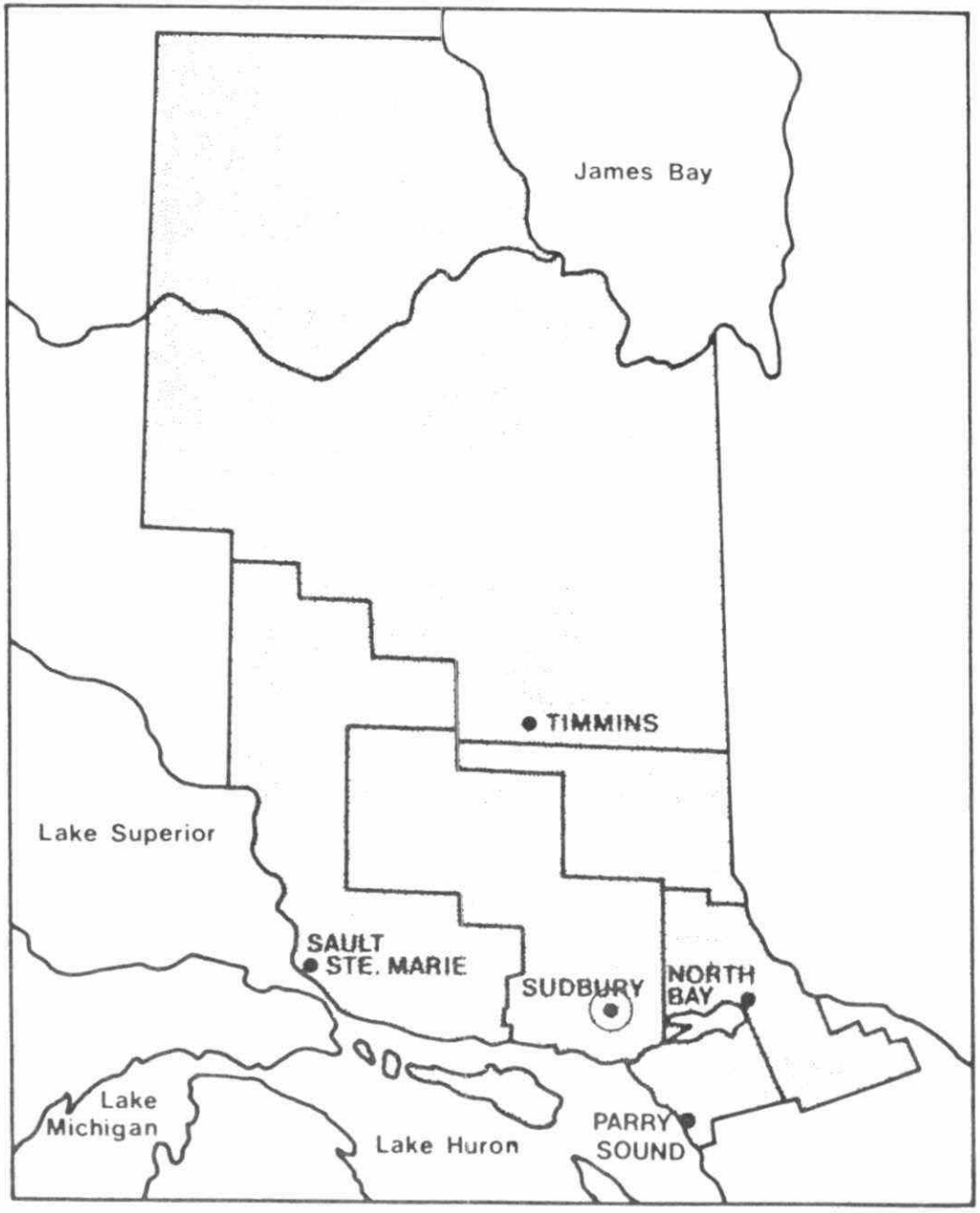
DISTRICT OFFICES

North Bay
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139


James Bay
TIMMINS
Lake Superior
SAULT
STE. MARIE
SUDBURY
NORTH
BAY
Lake
Michigan
Lake Huron
PARRY
SOUND

NICKEL CENTRE (CONISTON)

PROJECT: Nickel Centre (Coniston) WPCP

PROJECT NO. 2-0008-57

TREATMENT: Oxidation Ditch

DESIGN FLOW: 0.350 mgd

BOD - Raw Sewage 200 mg/l
Removal 93%

SS - Raw Sewage 250 mg/l
Removal 93%

NEW PLANT

OXIDATION DITCH:
Capacity: 185,000 gal.
Detention: 22.4 hr.
Operating Depth 5 ft.

Rotor: Two, 8'2" width, each powered by 10HP motor.

CLARIFIER:
30' dia. x 8' awd
Volume: 35,000 I. Gal. Detention: 4.2 hours
Overflow Rate: 280 I. Gal/ft^2/day

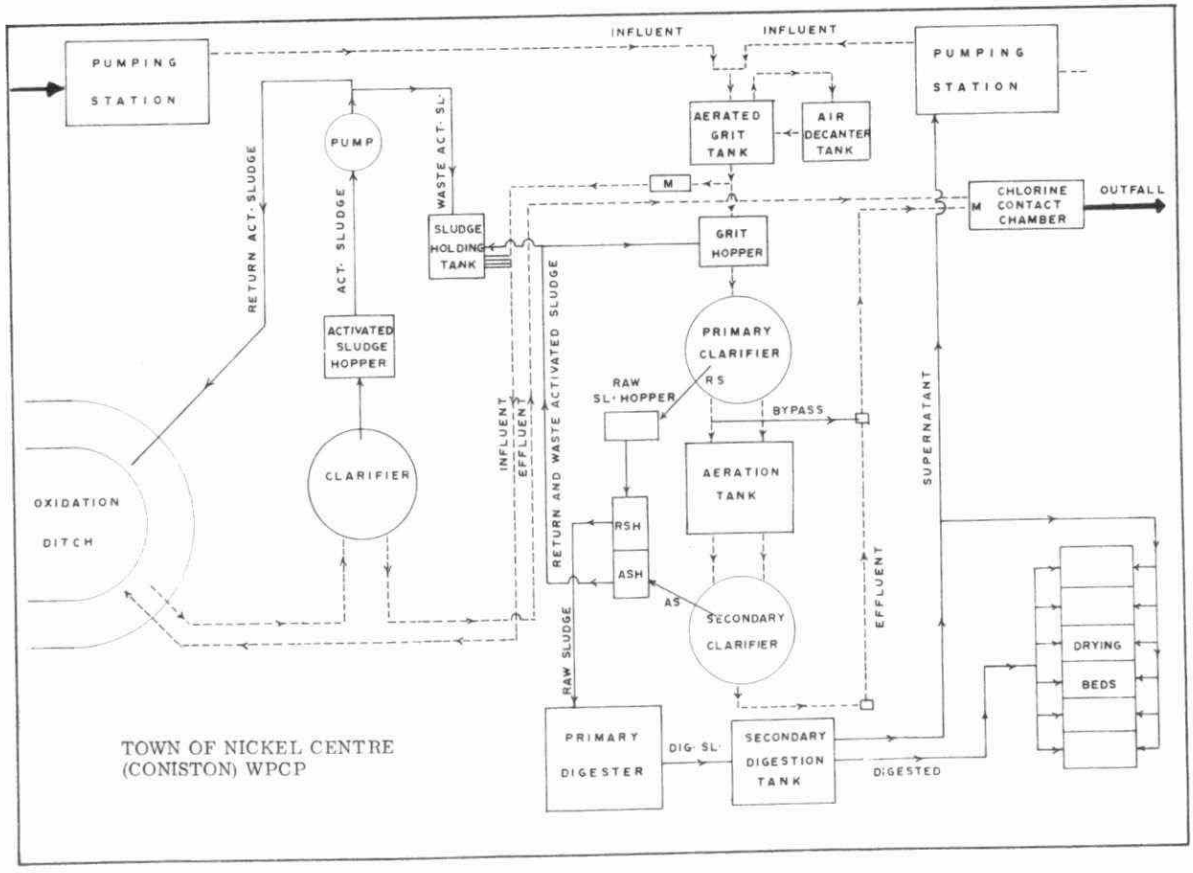
SLUDGE HOLDING TANK:
12.9' x 11' x 12.9' awd
Volume: 11,000 I. Gal.

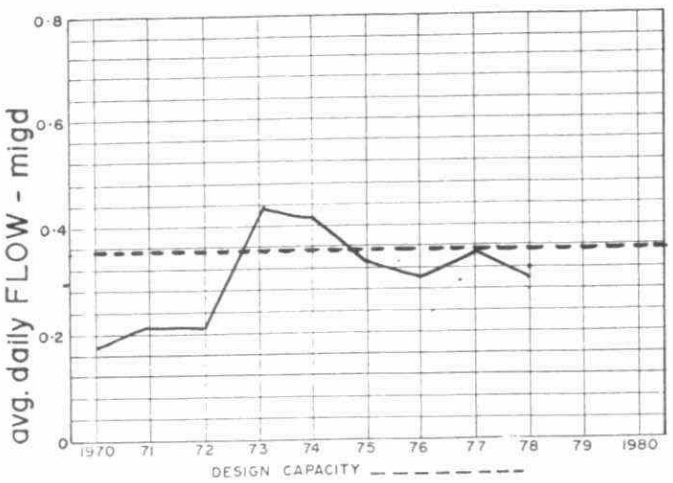
CHLORINE CONTACT CHAMBER:
Four passes, each 15' x 2.5' x 7.75' awd
Volume: 7,200 I. Gal.
Detention: 30 min.

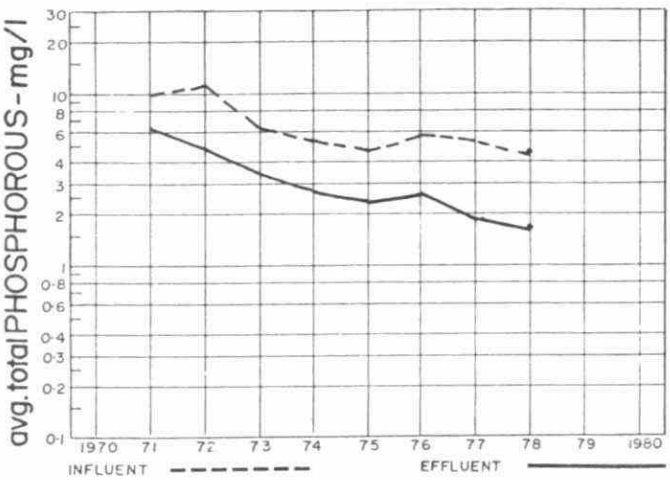
CHLORINATOR:
Type: Fisher and Porter

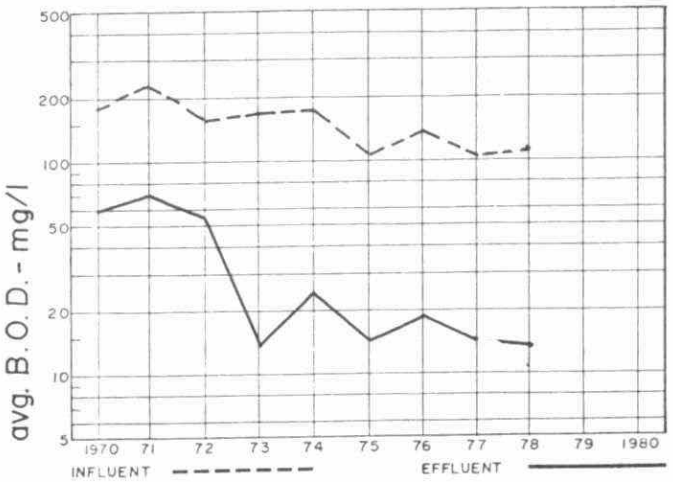
OUTFALL

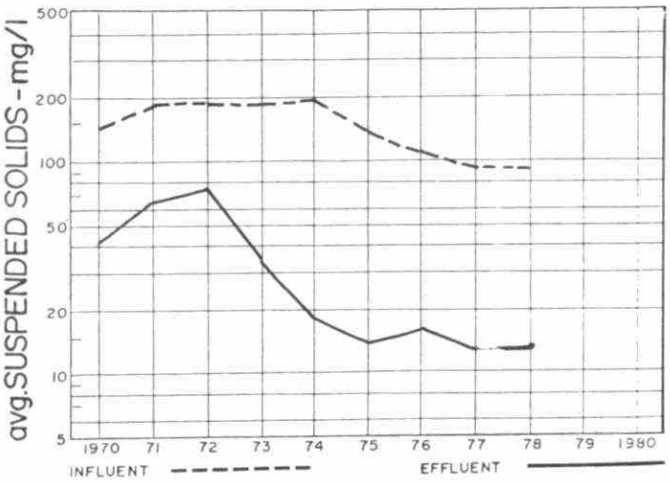
- 10" Transite to creek











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000123 — CONISTON W P C P

MUNICIPALITY : NICKEL CENTRE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : OXIDATION DITCH
CONVENTIONAL SECONDARY

CURRENT POPULATION : 12,615

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.350 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	8.468	.273	.315		155.0	47.0	69	9.1	109.0	12.0	88	8.2	7.0	3.0	57	.3
FEB	7.081	.253	.299		125.0	10.0	92	8.1	91.0	13.0	85	5.5	6.7	2.7	59	.2
MAR	8.877	.286	.370		140.0	10.0	92	11.5	111.0	15.0	86	8.5	6.1	3.6	40	.2
APR	19.654	.655	.959	2.250	38.0	4.0	89	6.6	64.0	13.6	78	9.9	1.4	.8	42	.1
MAY	10.933	.377	.613	1.900	100.0	8.5	91	10.0	75.0	10.0	86	7.1	3.1	1.4	54	.1
JUN	6.741	.225	.441	.800	115.0	38.0	66	5.1	88.0	14.5	83	4.9	6.5	.6	90	.3
JUL	7.535	.243	.298	.800	160.0	4.5	97	11.7	123.0	12.6	89	8.3	7.3	1.1	84	.4
AUG	8.369	.269	.728	.950	105.0	5.0	95	8.3	106.0	13.6	87	7.7	5.7	1.9	66	.3
SEP	11.503	.383	.600	2.200	55.0	9.0	83	5.2	92.0	14.0	84	8.9	2.4	1.7	29	
OCT	13.061	.421	.573	1.600	95.0	11.0	88	10.9	88.0	10.0	88	10.1	3.2	1.1	65	.2
NOV	9.593	.320	.489	.747	95.0	9.0	90	8.2	91.0	11.9	86	7.5	4.0	.5	87	.3
DEC	9.229	.298	.385	.747	130.0	4.5	96	11.5	111.0	11.4	89	9.1	5.0	3.1	38	.1
TOTAL	121.044							106.2				95.7				2.5
AVERAGE		.334	MAXIMUM .959	MAXIMUM 2.250	109.4	13.3	87		95.7	12.6	86		4.8	1.7	63	
NO. OF SAMPLES					16	16			159	147			16	16		

TERTIARY TREATMENT PLANTS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
1180 20th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Clinton
c/o Ministry of
Agriculture & Food
519-482-3428

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
Lake Erie
WINDSOR

STRATFORD

PROJECT City of Stratford WPCP

PROJECT NO. 2-0002-57

TREATMENT Activated Sludge

DESIGN FLOW 6.0 mgd

DESIGN POPULATION 30,000

BOD - Raw Sewage 140 mg/l
- Removal 90%

SS - Raw Sewage 250 mg/l
- Removal 95%

PRIMARY TREATMENT

Comminution

Type: Barminutor
Size: One Model B (36')

Grit Removal

Type: Dorr detritor
Size: One 20' x 20' x 1' (2500 gal)
Retention: 0.9 min

Primary Sedimentation

Type: Infilco
Size: Four 80' dia x 10½' swd (1.32 mil gal)
NOTE: Two used for storm flows only
Retention: 2.7 hr (2 cl)
Loading: Surface, 600 gal/ft^2/day
Weir, 12,000 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Diffused air; triple-pass
Size: Five 85½' x 25' 8" (avg) x 13' (0.97 mil gal)
Retention: 3.9 hr

Diffusers

Type: Activated Sludge Ltd. Alundum Domes

Air Supply

Type: Roots-Connersville
Size: Three 1750 cfm

Secondary Sedimentation

Type: Infilco
Size: Two 80' dia x 11' 3" swd (0.705 mil gal)
Retention: 2.7 hr
Loading: Surface, 600 gal/ft^2/day
Weir, 12,000 gal/ft/day

CHLORINATION

Chlorine Contact Chamber

Size: 67' x 27' x 8' (90,000 gal)
Retention: 22 min

Chlorinator

One F & P 500 lb/day

OUTFALL

Avon River

SLUDGE HANDLING

Digestion System - Heated, two-stage

Type: Gas mixed
Size: One 73' dia x 26' swd (100,00 cu ft or 0.624 mil gal)

Primary Stage (inner)

Size: 67,600 cu ft
Loading: 2.8 lb/cu ft/mo

Secondary Stage (outer ring)

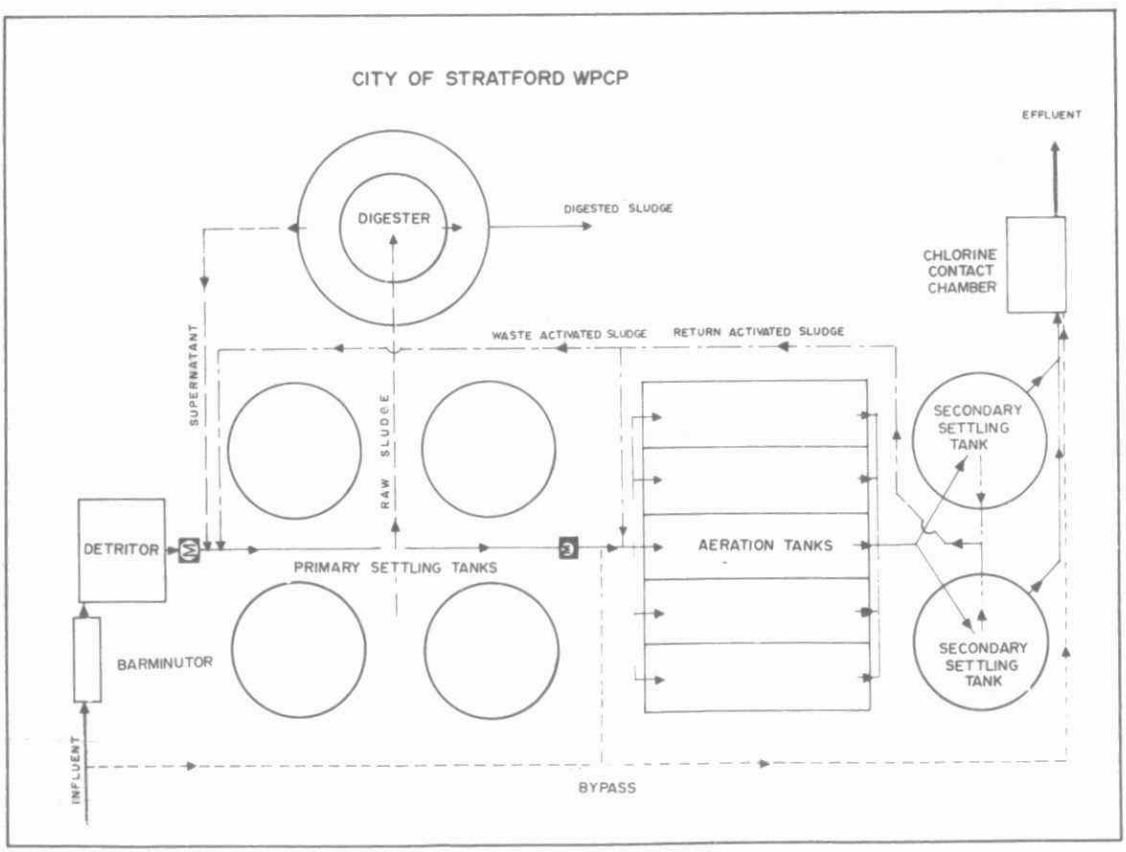
Size: 32,400 cu ft
Total Loading: 1.9 lb/cu ft/mo

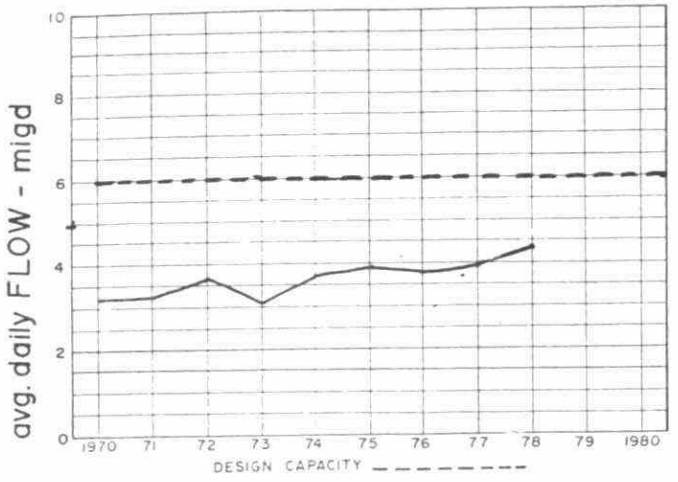
TERTIARY TREATMENT

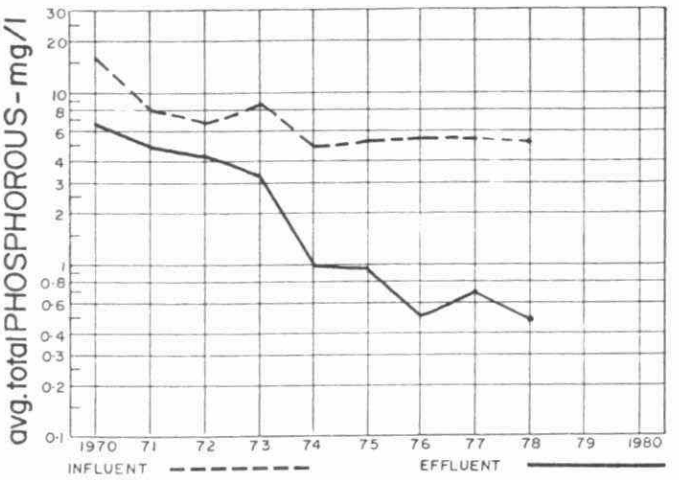
Rate: 8 MGD (5 USGPM / ft^2)
Type: Four, variable declining rate anthacit and sand filters
Size: (each) 13' x 26'

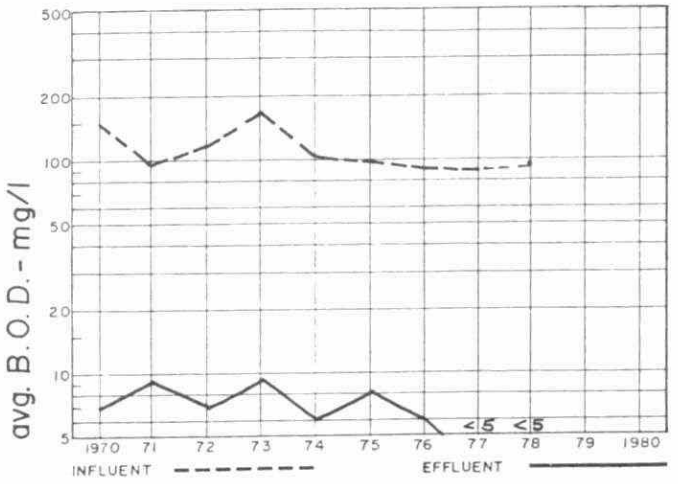
PHOSPHORUS REMOVAL

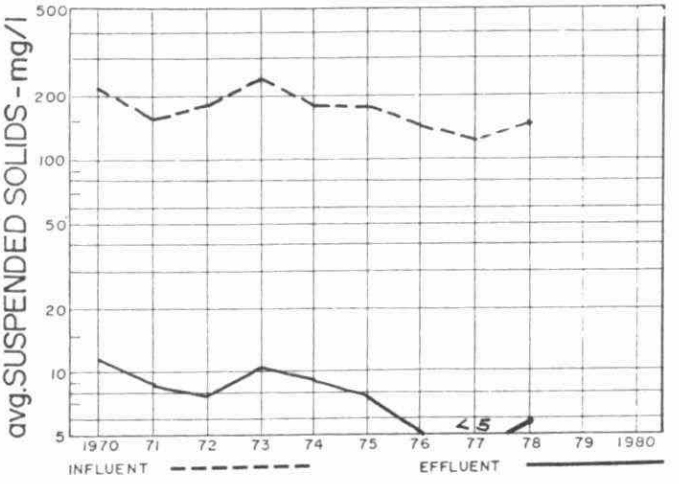
Tank: 6000 Gal. cap.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000702 — STRATFORD WPCP

MUNICIPALITY : STRATFORD
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL SECONDARY
EFFLUENT FILTRATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 26,515

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 6.000 MIGD — DESIGN BOD5 : 140.0 MG/L — DESIGN SUSP. SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	116.700	3.700	5.500	17.000	79.0	4.0	94	87.5	220.0	3.0	98	253.2	4.8	1.1	77	4.3
FEB	94.300	3.400	3.900	17.000	86.0	4.0	95	77.3	152.0	3.0	98	140.5	4.2	.4	90	3.5
MAR	174.500	5.600	13.700	17.000	88.0	7.0	92	141.3	174.0	5.0	97	294.9	3.3	.5	84	4.8
APR	231.830	7.730	14.000	17.000	59.0	9.5	83	114.7	82.0	10.7	86	165.2	3.6	.7	80	6.7
MAY	134.160	4.330	5.980	17.000	72.0	3.2	95	92.3	80.0	8.1	89	96.4	6.8	.6	91	8.3
JUN	102.140	3.400	5.230	17.000	104.0	5.7	94	100.4	228.0	5.8	97	226.9	6.4	.7	89	5.8
JUL	95.430	3.080	4.230	9.000	111.0	3.3	97	102.7	125.0	3.5	97	115.9	6.8	.5	92	6.0
AUG	93.820	3.030	3.870	17.000	108.0	2.2	97	99.2	169.0	4.0	97	154.8	6.6	.4	93	5.8
SEP	139.100	4.637	11.200	17.000	86.0	3.3	96	115.0	96.0	8.0	91	122.4	4.4	.3	93	5.7
OCT	133.860	4.320	7.720	17.000	124.0	3.5	97	161.3	139.0	7.5	94	176.0	5.6	.6	89	6.6
NOV	124.370	4.150	7.090	17.000	154.0	7.7	95	181.9	292.0	6.0	97	355.6	6.7	.6	91	7.5
DEC	140.860	4.540	9.130	17.000	64.0	5.5	91	82.4	110.0	4.6	95	148.4	3.7	.3	91	4.7
TOTAL	1581.070							1356.0				2250.2				69.7
AVERAGE		4.326	MAXIMUM 14.000	MAXIMUM 17.000	94.5	4.9	94		155.5	5.7	96		5.2	.5	89	
NO. OF SAMPLES					62	58			62	59			62	59		

Ministry of the Environment
Ontario

West Central Region

(2)

REGIONAL OFFICE

STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES

Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

WATERLOO
CAMBRIDGE
HAMILTON
STONEY CREEK
WELLAND
Lake Ontario
Lake Erie

ORANGEVILLE

PROJECT NO.	2-0208-66
TREATMENT	Activated Sludge
DESIGN FLOW	1.5 mgd
DESIGN POPULATION	7,500
BOD - Raw Sewage	200 mg/l
SS - Raw Sewage	250 mg/l

LIFT PUMPS

Type: Smart-Turner
Size: Two 300 gpm @ 20' tdh
One 500 gpm @ 25' tdh

PRIMARY TREATMENT

Grit Removal

Type: Channels, manually cleaned
Size: Two 25' x 1' 10 3/4" wide
Flow Velocity: 1 fps @ 0.366' depth

Primary Sedimentation

Type: Spiraflow (peripheral feed)
Size: One 35' dia x 12' swd
(72,000 gal)
Retention: 2.31 hr
Loading: Surface, 780 gal/ft^2/day
Weir, 7350 gal/ft/day

SECONDARY TREATMENT

Aeration Tanks

Type: Diffusee air; single-pass
Size: Two 63 x 21 x 12'
(198,000 gal)
Retention: 6.33 hr
Diffusers: Dorr Inka

Air Supply

Type: Powlesland-Bailey fan
Size: Two 3200 scfm @ 30" wc

Secondary Sedimentation

Type: Dorr
Size: One 45' dia x 9.17' swd
(97,300 gal)
Retention: 3.12 hrs
Loading: Surface, 470 gal/ft^2/day
Weir, 5820 gal/ft/day

CHLORINATION

Type: W & T
Size: One 75 lb/day

Chlorine Contact Chamber

Size: One 29.75 x 12 x 6.92'
(15,400 gal)
Retention: 29.6 min

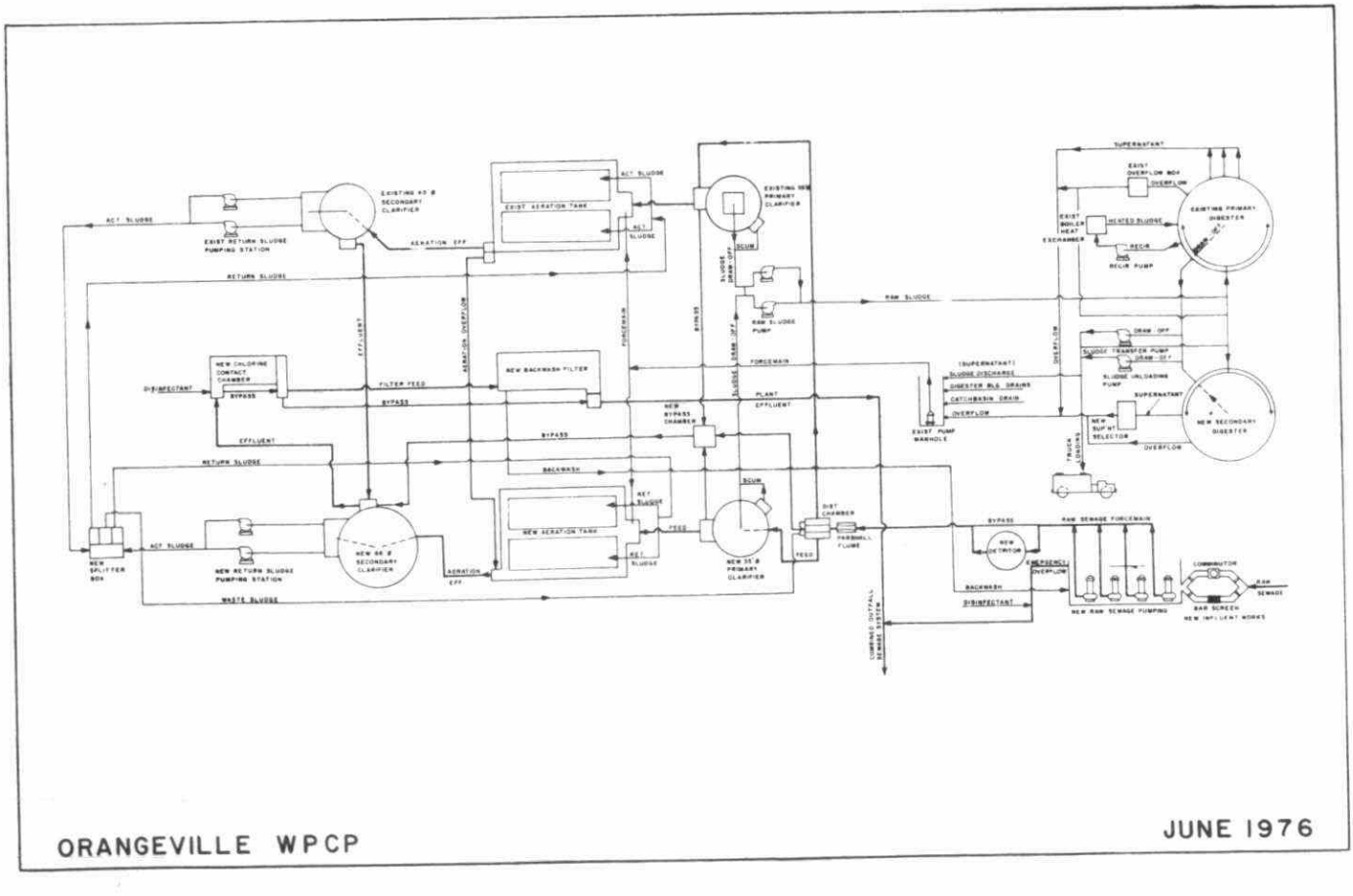
OUTFALL

to Credit River

SLUDGE HANDLING

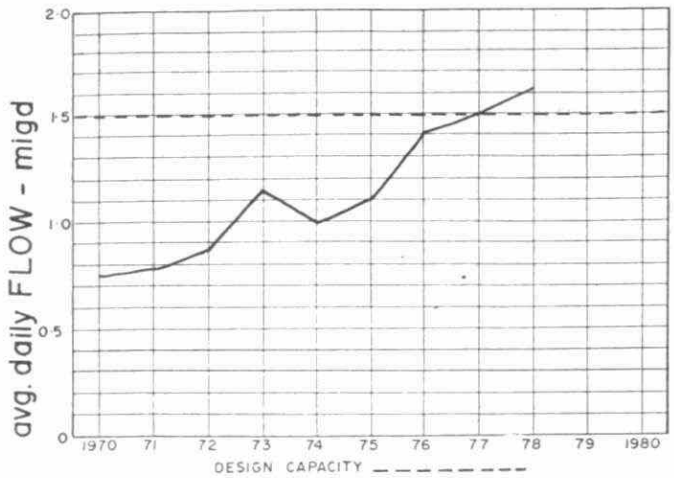
Digestion System - Single Stage

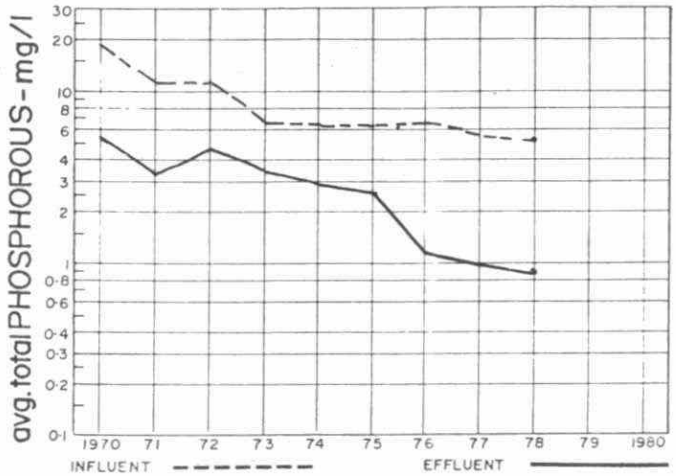
Type: Carter gas mixed, floating cover
Size: One 45' dia x 20' swd
(34,500 cu ft or 215,000 gal)
Loading: 1.5 lb/cu ft/mo

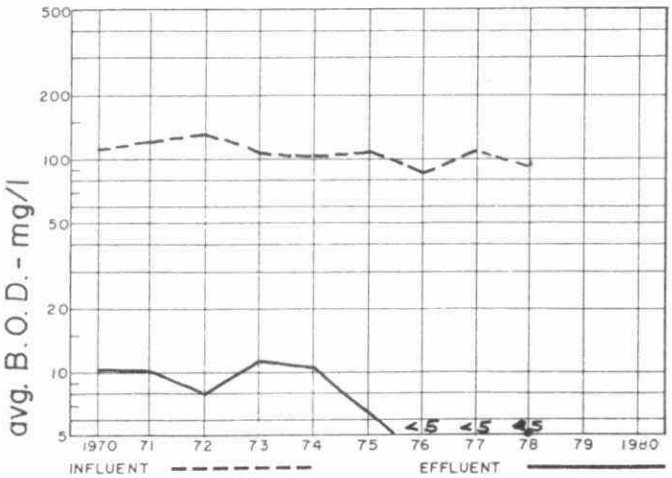


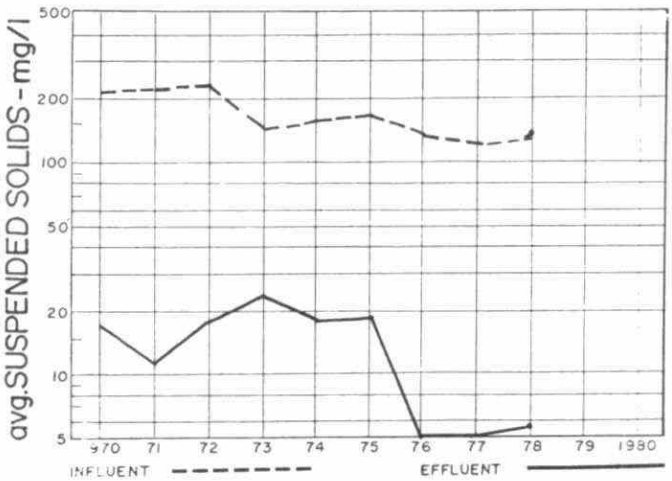
ORANGEVILLE WPCP

JUNE 1976









ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000542 — ORANGEVILLE WPCP

MUNICIPALITY : ORANGEVILLE
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
EFFLUENT FILTRATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 13,034

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.500 MIGD — DESIGN BOD5 : 200.0 MG/L — DESIGN SUSP.SOLIDS : 250.0 MG/L

	*FLOW DATA				BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				TOTAL PHOSPHORUS			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	44.470	1.430	1.800		93.0	6.0	93	38.6	110.0	7.0	93	45.8	5.6	1.1	80	2.0
FEB	36.550	1.310	1.560		113.0	6.0	94	39.1	137.0	9.0	93	46.7	5.8	1.2	79	1.6
MAR	56.520	1.820	3.130		86.0	6.0	93	45.2	182.0	7.0	96	98.9	5.1	1.2	76	2.2
APR	89.972	2.999	4.520		65.0	4.5	93	54.4	78.0	5.1	93	65.5	4.4	.8	81	3.2
MAY	63.286	2.041	3.440		65.0	7.2	88	36.5	96.0	5.0	94	57.5	4.2	.8	80	2.1
JUN	42.706	1.423	1.745		110.0	8.0	92	43.5	132.0	7.4	94	53.2	5.3	.9	83	1.8
JUL	37.583	1.212	1.420		110.0	4.2	96	39.7	176.0	5.3	96	64.1	5.6	1.0	82	1.7
AUG	40.286	1.299	1.913		105.0	3.2	96	41.0	197.0	2.3	98	78.4	6.5	.9	86	2.2
SEP	49.965	1.666	3.000		77.0	3.0	96	36.9	124.0	3.1	97	60.4	3.9	.6	84	1.6
OCT	44.192	1.425	2.012		88.0	2.6	97	37.7	161.0	4.4	97	69.2	6.5	.7	89	2.5
NOV	41.362	1.378	1.877		98.0	1.8	98	39.7	140.0	4.1	97	56.2	4.9	.8	83	1.6
DEC	44.286	1.428	2.022		120.0	8.0	93	49.6	166.0	9.0	94	69.5	6.9	1.4	79	2.4
TOTAL	591.178							501.9				765.4				24.9
AVERAGE		1.619	MAXIMUM 4.520	MAXIMUM	94.1	5.0	94		141.5	5.7	95		5.3	.9	82	
NO. OF SAMPLES					24	24			57	56			24	22		

SIMCOE

PROJECT: : Simcoe
PROJECT NO. : 1-0278-71
TREATMENT : Activated Sludge
DESIGN FLOW : MIGD 3.232
Old Plant 0.6 MIGD
New Plant 2.6 MIGD

RAW SEWAGE PUMPING STATION
Two identical centrifugal vertical variable speed sewage pumps each rated at 2500 IGPM at 55' TDH. Driven by two 60 HP 1200 RPM motors. Two constant speed pumps each rated at 1666 IGPM at 55' TDH.

FLOW MEASUREMENT
A meter chamber with a 12" diameter magnetic flow meter.

GRIT REMOVAL
Two 14'x14'x1.5' Dorr detritors.

SCREENING
Two 24 inch barminutors, model "C".

OLD PLANT

PRIMARY SEDIMENTATION
One 50'x20'x8' (50,000 gal.) tank
Retention: 4.31 hr.
Loading: Surface 600 gal/sq.ft/day
Weir, 30,000 gal/ft/day

AERATION TANKS
One four pass diffused air unit.
Size: 8 -12'x50'x8' (240,000 gal.)
Retention: 9.6 hr.
Air supplied by two Roots-Connersville 1200 SCFM units delivering through holes in pipes and spargers.

SECONDARY SEDIMENTATION
One Dorr 46' (hex.)x9.5' SWD. tank
Retention: 3.16 hr. with 25% return sludge
Loading: Surface, 360 gal/sq.ft/day
Weir, 4150 gal/ft/day

NEW PLANT

PRIMARY SEDIMENTATION
Four circular syphon fed units 45' diam. x10' SWD, with scum collector and sludge thickener hopper and mechanism.
Loading: Surface, 360 gal/sq.ft./day
Weir, 5570 gal/ft/day

AERATION TANKS
Four tanks each 98'x25'x12.5' SWD
Retention: 6.5 hrs.
Four blowers each rated at 6500 SCFM
Two blowers each rated at 5500 SCFM for a low pressure aeration system.

SECONDARY SEDMENTATION
Two Dorr 45' diam.x
Retention: 3.4 hr.
Loading: Surface, 440 gal/sq.ft/day
Weir, 5570 gal/ft/day
Two 60'x60' square tanks

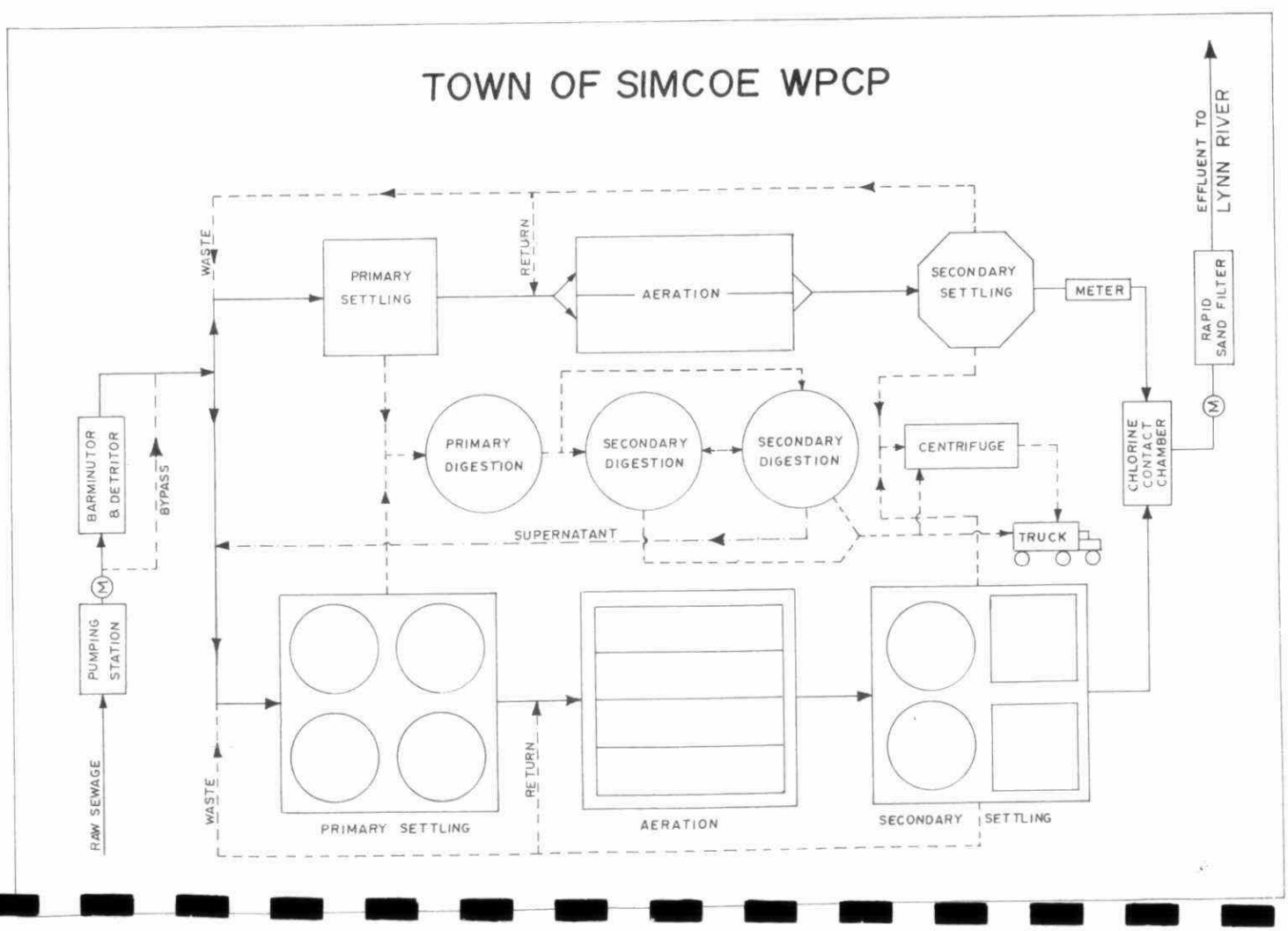
DIGESTION
One 70' diam. 25' SWD primary digester rated at 0.091 lb VSS/cu.ft/day for 3.5% sludge with 17.3 days retention.
Two 50' diam. 20' SWD secondary digesters for 58 days storage capacity

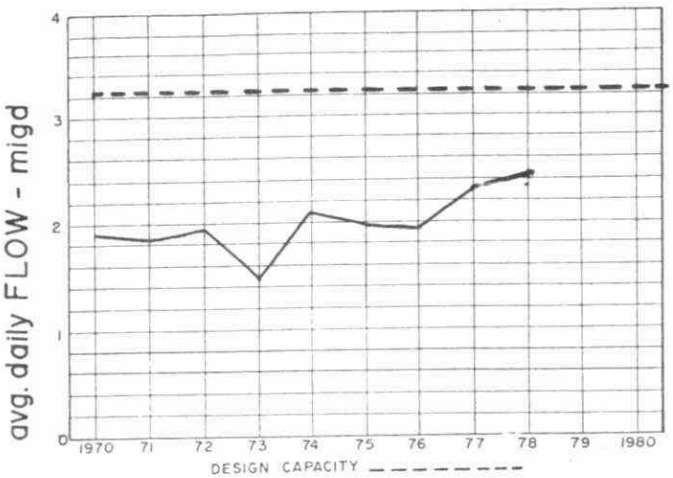
BOILER-CENTRIFUGE BUILDING
Two fire tube type boilers rated at 680 MBH and 840 MBH.
One Kruger 500 KDF centrifuge with sludge holding and chemical tanks.

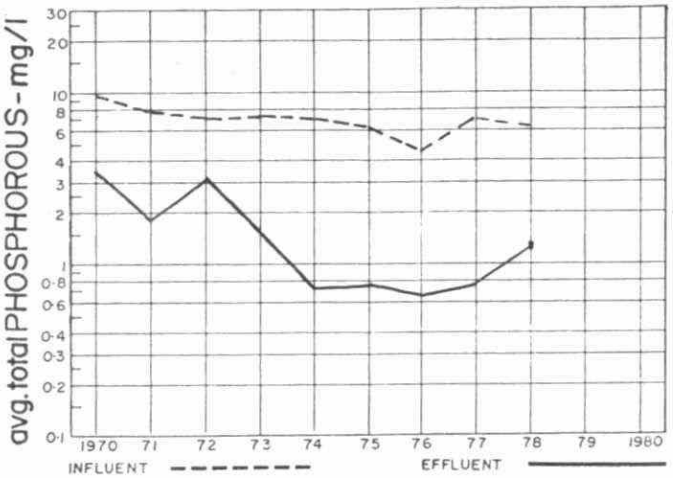
CHLORINATION
One chlorine contact chamber 42'x39.75'x8.5' SWD with 33 min. detention. One gas chlorinator (max. capacity 2000 lb/day) with 500 lb/day rotameter.

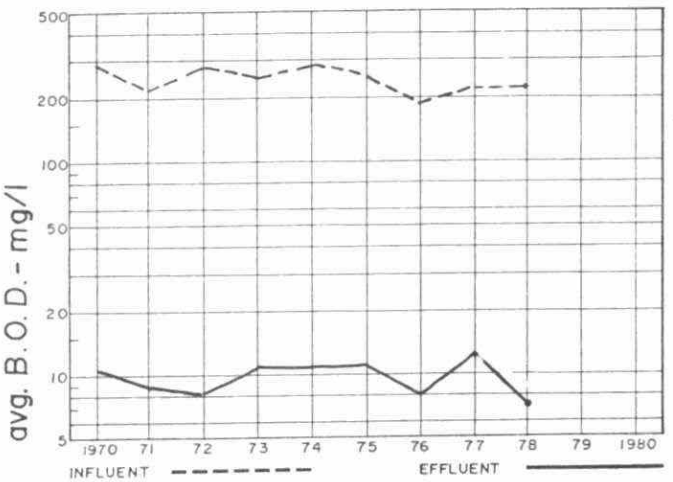
EFFLUENTS POLISHING FILTERS
One uncovered automatic backwash rapid sand filter (110'x16') rated at 1.34 IGPM/sq.ft.

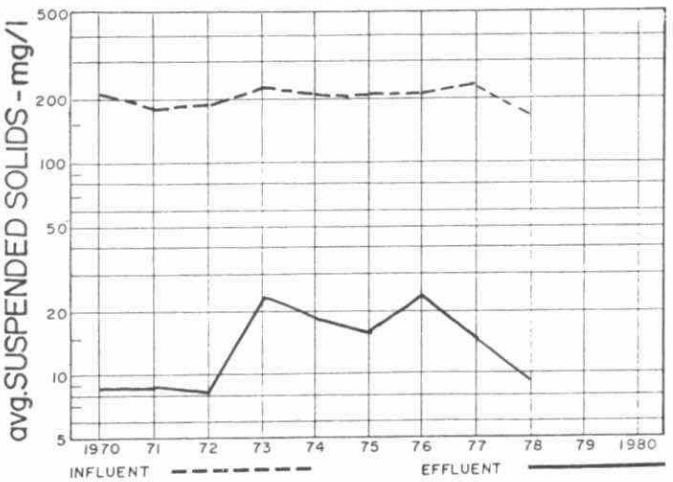
OUTFALL SEWER
A 24" diam. sewer discharging to Lynn River.











ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — SEWAGE TREATMENT - PERFORMANCE REPORT

WORKS NUMBER : 110000677 SIMCOE WPCP

MUNICIPALITY : SIMCOE
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL SECONDARY
EFFLUENT FILTRATION
PHOSPHORUS REMOVAL

CURRENT POPULATION : 14,093

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 3.232 MIGD DESIGN BOD5 : 220.0 MG/L DESIGN SUSP.SOLIDS : 230.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	PEAK RATE MIGD	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	65.490	2.110	2.680		186.0	7.0	96	117.2	205.0	11.0	94	127.0	6.7	1.2	82	3.6
FEB	60.770	2.170	2.690		305.0	10.0	96	179.2	168.0	11.0	93	95.4	8.0	.4	95	4.6
MAR	79.460	2.560	4.070		315.0	8.0	97	243.9	228.0	11.0	95	172.4	9.5	.4	95	7.2
APR	74.772	2.492	2.964		169.0	10.5	93	118.5	127.0	20.0	84	80.0	6.2	.8	87	4.0
MAY	80.534	2.598	3.450		98.0	6.4	93	73.7	55.0	10.3	81	35.9	3.8	.3	92	2.8
JUN	78.280	2.609	2.950		218.0	5.6	97	166.2	215.0	3.7	98	165.4	1.2	4.0	-	-
JUL	78.637	2.537	3.436		31.0	14.2	54	13.2	65.0	13.5	79	40.4	4.4	1.9	56	1.9
AUG	84.509	2.726	3.100		365.0	10.0	97	300.0	171.0	.5	99	144.0	6.9	3.8	44	2.6
SEP	62.706	2.090	3.269		255.0	6.0	97	156.1	248.0	12.5	94	147.6	7.4	.5	93	4.3
OCT	74.573	2.406	3.860		230.0	3.0	98	169.2	260.0	7.3	97	188.4	6.6	.4	93	4.6
NOV	72.500	2.417	4.320	4.800	260.0	4.2	98	185.4	212.0	3.9	98	150.8	6.9	1.0	85	4.2
DEC	69.764	2.250	3.038	4.100	228.0	3.1	98	156.8	175.0	4.1	97	119.2	6.1	1.2	80	3.4
TOTAL	881.995							1879.4				1466.5				43.2
AVERAGE		2.414	MAXIMUM 4.320	MAXIMUM 4.800	221.6	7.3	96		177.4	9.0	94		6.1	1.3	78	
NO. OF SAMPLES					20	19			78	88			36	29		

WASTE STABILIZATION PONDS

Ministry of the Environment
Ontario

Southwestern Region

①

REGIONAL OFFICE

LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES

Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
1180 20th St. E.
519-371-2901

SUB-OFFICE

Chatham
435 Grand Ave W.
519-352-5107

Clinton
c/o Ministry of
Agriculture & Food
519-482-3428

Georgian Bay
Lake Huron
OWEN SOUND
SARNIA
LONDON
CHATHAM
Lake Erie
WINDSOR

Waste Stabilization Pond

PROJECT : AYLMER

Cell Acreage : 17.7 + 20.5 + 16.0 + 17.7

Total Acreage : 71.9

Commenced Operation 1961

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

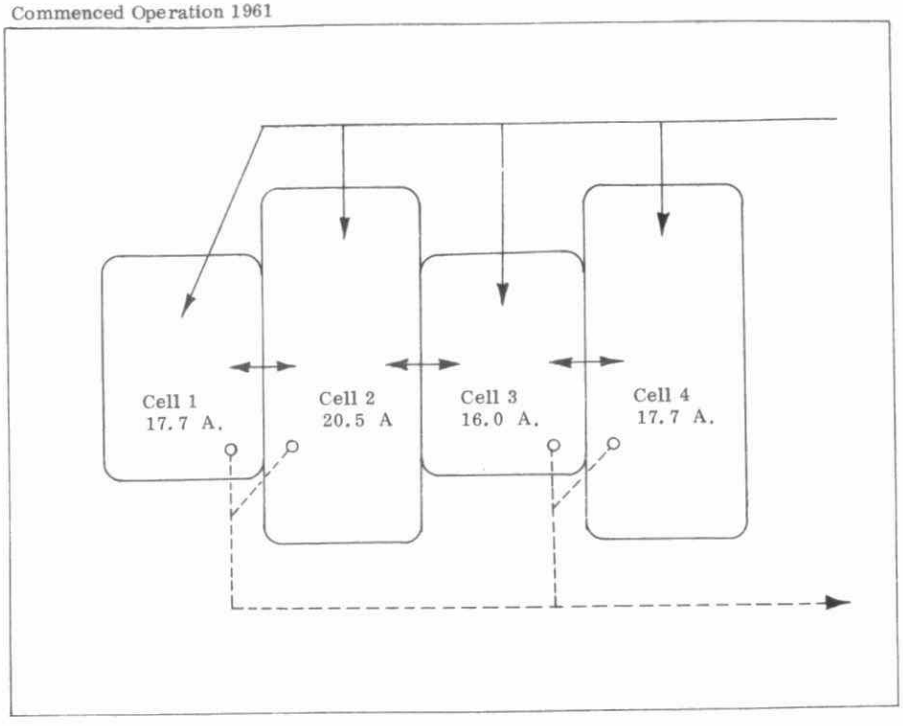
Flow Measurement :

- □ Flow Meter
- □ Integrator (N/A)
- □ Pump Timer NO METER

Pumping Station

Pump 1 : 1440 I gpm
Pump 2 : 1440 I gpm

Total Cap : N/A



Signifigant Industries : Dairy , Tabalo

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000891 AYLMER LAGOON

MUNICIPALITY : AYLMER
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON
PHOSPHORUS REMOVAL

CURRENT POPULATION : 5,156

* COMMENT: H YDRAULIC OVERLOAD

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.540 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
							REDUCTION					REDUCTION				REDUCTION
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	25.832	.833	2.112		344.0	9.2	97	86.4	233.0	8.0	96	58.1	10.3	5.3	48	1.2
FEB	14.216	.508	.512		167.0	52.0	68	16.3	137.0	23.0	83	16.2	11.4	7.1	37	.6
MAR	25.248	.814	1.664		84.0	34.3	59	12.5	207.0	11.1	94	49.4	11.1	5.1	54	1.5
APR	42.700	1.400	2.500		118.0	16.9	85	43.1	187.0	23.5	87	69.8	10.6	2.6	75	3.4
MAY	26.900	.868	1.600		104.0	15.8	84	23.7	75.5	31.5	58	11.8	9.6	1.4	85	2.2
JUN	18.700	.623	.850		154.0				341.0				21.3			
JUL	16.700	.557	.667		84.0				103.0				11.8			
AUG	19.000	.613	1.267		164.3				252.0				13.5			
SEP	15.300	.546	1.000		104.7				70.3				13.9			
OCT	17.700	.571	.950		187.5	6.7	96	32.0	91.0	10.5	88	14.2	12.5	3.3	73	1.6
NOV	17.655	.589	.825		91.0	1.8	98	15.7	94.5	5.5	94	15.7	15.8	1.5	90	2.5
DEC	21.280	.686	1.340		140.0	8.8	93	27.9	123.0	8.0	93	24.4	8.5	2.4	71	1.2
TOTAL	261.231							257.6				259.6				14.2
AVERAGE		.717	MAXIMUM 2.500		145.2	18.1	87		159.5	15.1	90		12.5	3.6	71	
NO. OF SAMPLES					28	26			28	26			28	26		

Waste Stabilization Pond

PROJECT : BELMONT

Cell Acreage : 8.1 + 8.1

Total Acreage : 16.2

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

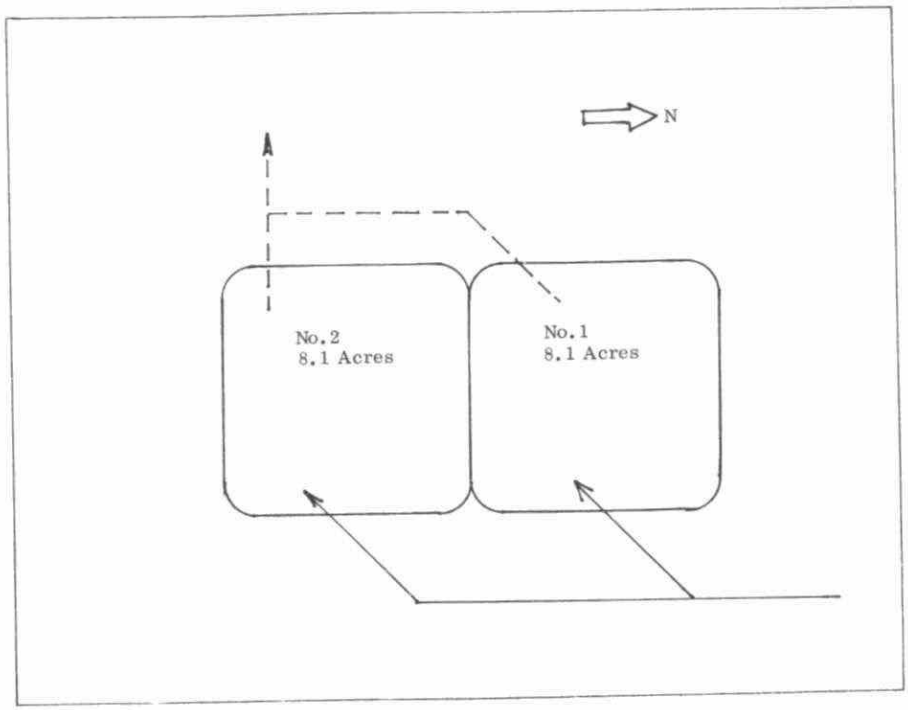
- ☐ Batch
- ☐ Continuous
- ☐ None

Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 344 Igpm
Pump 2 : 100 Igpm
(Washburn St.)
Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002032 BELMONT LAGOON

MUNICIPALITY : BELMONT
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL * COMMENT: LAGOON CONSTRUCTION COMPLETED IN Nov. 1978

CURRENT POPULATION : 744

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.124 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.237	.040			134.0				130.0				8.3			
FEB	1.116	.040			106.0				97.0				7.3			
MAR	3.909	.126			117.0				94.0				5.7			
APR	1.736	.056			28.0	7.1	74	.3	39.8	10.5	73	.5	2.3	.7	69	
MAY	1.259	.041			44.0				28.5				3.2			
JUN	.954	.032	.046		230.0				166.0				11.9			
JUL	1.357	.044	.155		190.0				253.0				12.1			
AUG	1.062	.034	.075		210.0				181.7				9.6			
SEP	.926	.033	.049		139.3				100.3				9.0			
OCT	1.409	.045	.107		148.5	3.7	97	2.0	88.5	5.7	93	1.1	9.7	.7	92	.1
NOV	1.230	.041	.069		80.0				71.5				6.6			
DEC	2.068	.067	.253		101.5				267.0				5.7			
TOTAL	18.263							2.3				1.6				.1
AVERAGE		.050	MAXIMUM .253		127.3	5.4	95		126.4	8.1	93		7.6	.7	90	
NO. OF SAMPLES					26	11			26	11			26	11		

Waste Stabilization Pond

PROJECT : CHESLEY

Cell Acreage : 6 + 5 + 6

Total Acreage : 17.0

Commenced Operation : Oct. 1963

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : 1 & 2 parallel series to #3

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

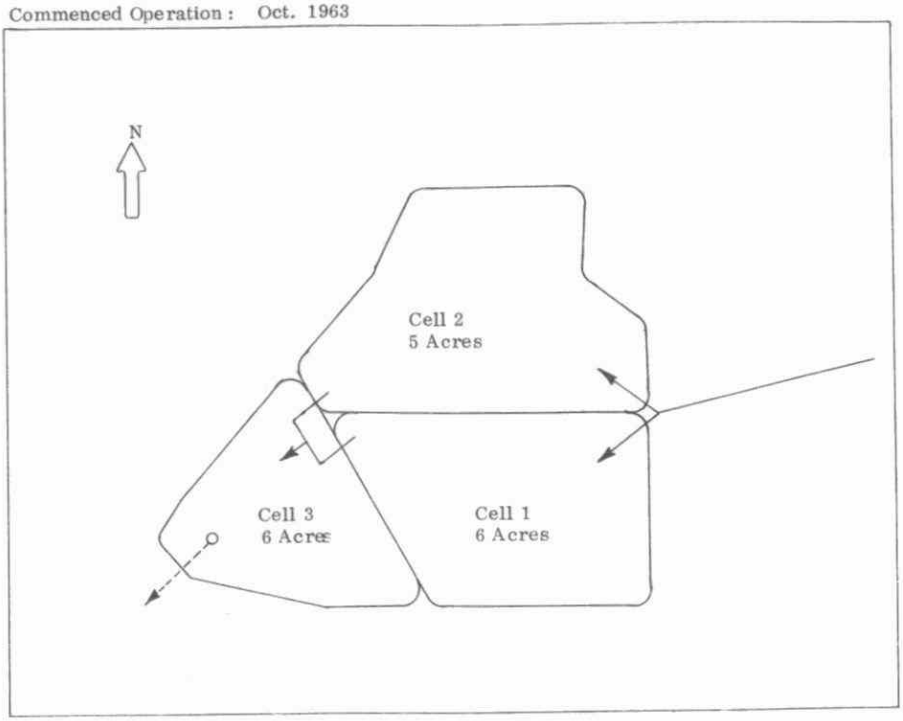
Flow Measurement :

- ☐ Flow Meter
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : N/A
Pump 2 : N/A

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000105 CHESLEY LAGOON

MUNICIPALITY : CHESLEY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 1,859

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	5.105	.164														
FEB	4.324	.154														
MAR	5.779	.186			130.0	27.0	79	5.9	151.0	19.0	87	7.6	7.2	3.7	48	.2
APR	8.756	.292			70.0	12.0	82	5.0	55.0	6.0	89	4.2	6.4	1.5	76	.4
MAY	6.465	.208			104.0	6.0	94	6.3	113.0	1.0	99	7.2	6.5	1.7	73	.3
JUN	5.893	.106			43.0	10.0	76	1.9	46.0	28.0	39	1.0	2.9	2.0	31	
JUL	4.701	.151			56.0	8.0	85	2.2	41.0	12.0	70	1.3	3.3	1.8	45	
AUG	5.409	.174			54.0	10.0	81	2.3	21.0	7.0	66	.7	2.2	2.8	-	-
SEP	3.827	.127			74.0				62.0				5.0			
OCT	7.614	.245			140.0	17.0	87	9.3	147.0	16.0	89	9.9	6.0	3.0	50	.2
NOV	6.672	.222			76.0	17.0	77	3.9	131.0	16.0	87	7.6	4.4	3.0	31	
DEC	8.413	.271			70.0	9.0	87	5.1	63.0	3.0	95	5.0	4.8	3.5	27	.1
TOTAL	72.958							41.9				44.5				1.2
AVERAGE		.192	MAXIMUM		81.7	12.8	84		83.0	12.0	85		4.8	2.5	47	
NO. OF SAMPLES					19	19			19	19			19	19		

Waste Stabilization Pond

PROJECT : (MITCHELL'S BAY)
DOVER TWP.

Cell Acreage : 5.0 +5.0

Total Acreage : 10.0

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : Series-parallel

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ☐ Annual
- ■ Other : Total Retention

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

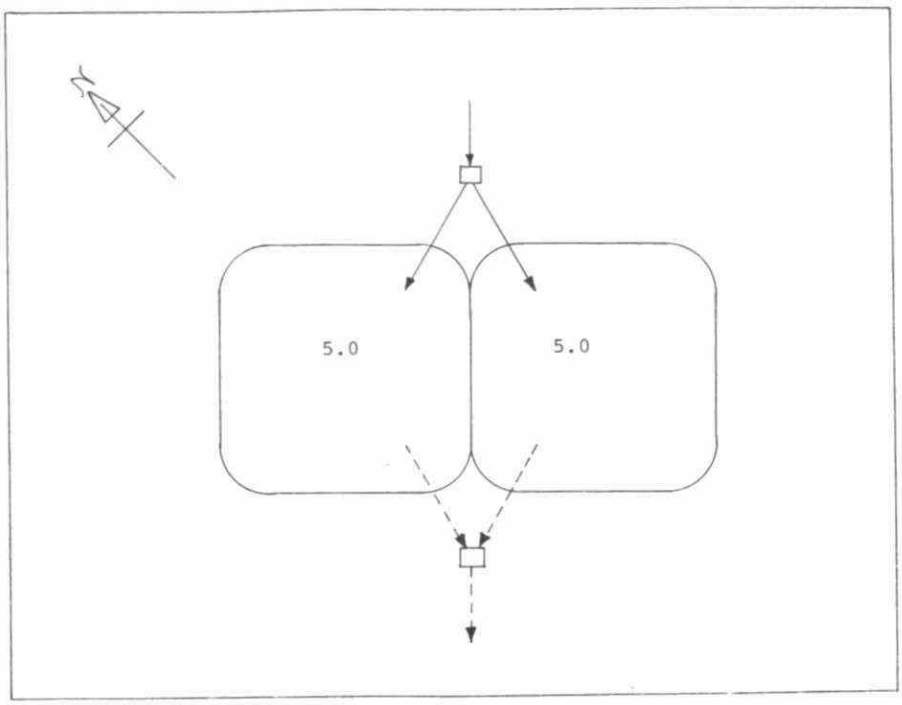
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002087 MITCHELL'S BAY LAGOON

MUNICIPALITY : DOVER MITCHELL'S BAY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON ANNUAL COMPLETE RETENTION

* COMMENT: NO DISCHARGE IN 1978

CURRENT POPULATION : 4,351

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.023 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

<--- * FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.274	.009														
FEB	.241	.009														
MAR	.209	.007														
APR	.060	.002														
MAY	.497	.016														
JUN	.800	.028														
JUL	1.298	.042														
AUG	.328	.011														
SEP	.204	.007														
OCT	.157	.005														
NOV	.393	.013														
DEC	.413	.013														
TOTAL	4.874															
AVERAGE			MAXIMUM .014													
NO. OF SAMPLES																

Waste Stabilization Pond

PROJECT : DUNDALK

Cell Acreage : 8 + 8

Total Acreage : 16

Commenced Operation : Dec. 1973

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

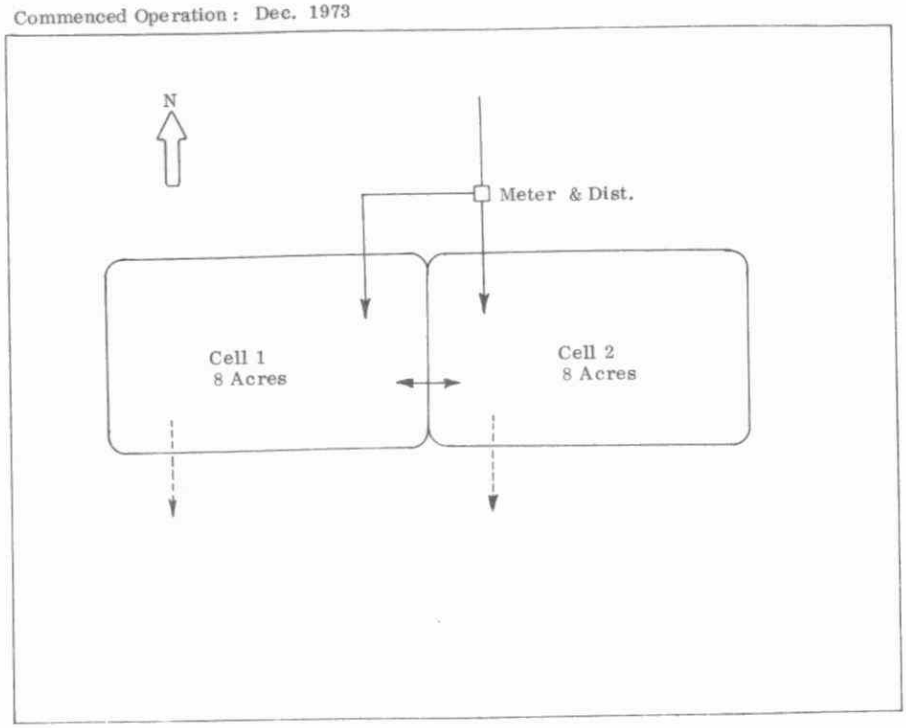
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 : (GRAVITY FLOW)

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001471 DUNDALK LAGOON

MUNICIPALITY : DUNDALK
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,168

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.143 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.919	.126			120.0				91.0				6.0			
FEB	3.267	.116			82.0				80.0				5.0			
MAR	4.426	.142														
APR	4.477	.149														
MAY	2.970	.096			92.0	16.0	82	2.2	86.0	31.0	63	1.6				
JUN	3.345	.111			72.0				63.0				4.6			
JUL	2.849	.092			122.0				218.0				9.2			
AUG	3.116	.100														
SEP	2.737	.091			84.0				65.0				5.1			
OCT	4.346	.104			5.0	11.0	-	-	31.0	43.0	-	-	4.4	.4	90	.1
NOV	3.255	.108			80.0	17.0	78	2.0	69.0	29.0	57	1.3	6.5	.8	87	.1
DEC	4.286	.138														
TOTAL	42.993							4.2				2.9				.2
AVERAGE		.114	MAXIMUM		82.1	14.6	82		87.8	34.3	60		5.8	.6	89	
NO. OF SAMPLES					9	17			9	17			8	8		

Waste Stabilization Pond

PROJECT : DUTTON

Cell Acreage : 10

Total Acreage : 10

Commenced Operation : Nov. 1972

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

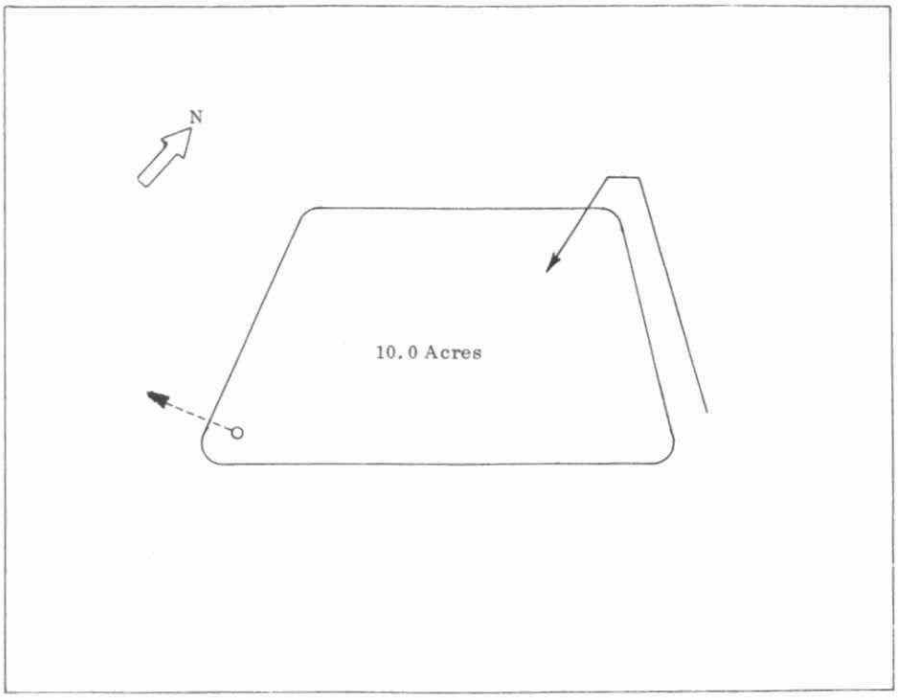
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 350 I gpm
Pump 2 : 350 I gpm

Total Cap : 350 I gpm



Signifigant Industries: Laundromat, Creamery

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001266 DUTTON LAGOON

MUNICIPALITY : DUTTON
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,043

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.070 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.309	.171	.204		140.0				136.0				7.5			
FEB	1.972	.070	.077													
MAR	2.644	.085	.092		700.0				188.0				11.5			
APR	2.455	.081	.098		318.0				346.0				13.6			
MAY	2.387	.077	.084			16.6				58.0				.5		
JUN	1.741	.058	.068		155.0				119.0				8.7			
JUL	1.775	.057	.061													
AUG	1.843	.059	.078		100.0				74.0				7.0			
SEP	1.920	.064	.073		165.0				90.0				9.9			
OCT	2.763	.089	.197		235.0				160.0				10.6			
NOV	3.068	.102			72.0				46.0				4.5			
DEC	2.667	.086	.119		175.0				222.0				10.2			
TOTAL	30.544															
AVERAGE		.083	MAXIMUM .204		228.8	16.6	92		153.4	58.0	62		9.2	.5	93	
NO. OF SAMPLES					12	2			12	2			12	2		

Waste Stabilization Pond

PROJECT : EAST ZORRA - TAVISTOCK TWP. (TAVISTOCK)

Cell Acreage : 15.0 + 17.0

Total Acreage : 32.0

Commenced Operation : Nov. 1962

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

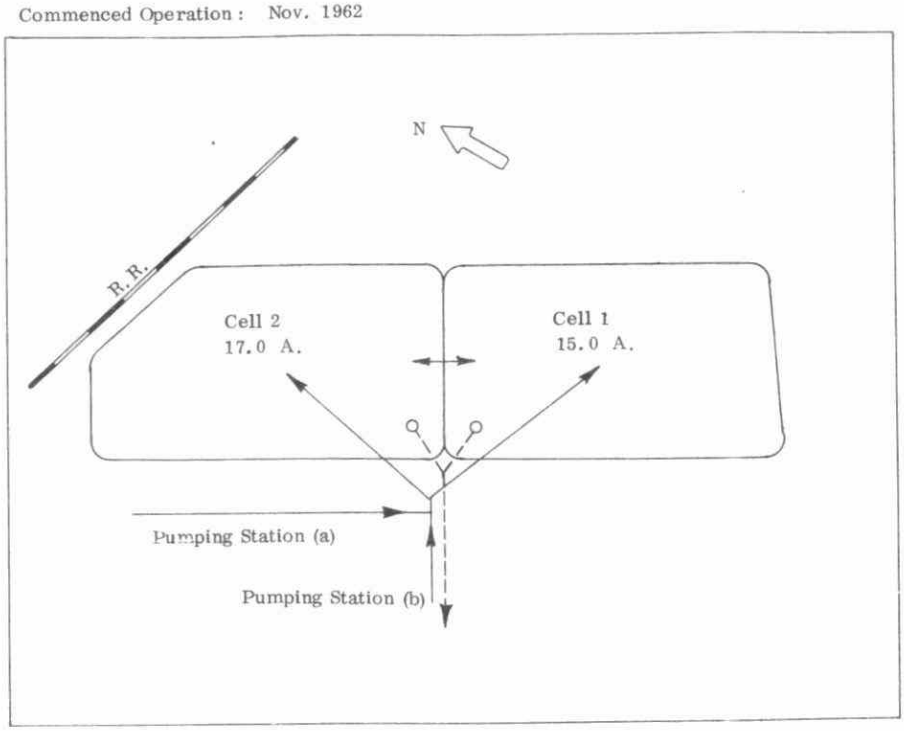
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 417 (a) 417 (b)
Pump 2 : 417 (a) 417 (b)

Total Cap : N/A



Signifigant Industries : Textile Mfg.

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000720 TAVISTOCK LAGOON

MUNICIPALITY : EAST ZORRA-TAVISTOCK
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 7,146

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.170 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	6.108	.197	.366		400.0				205.0				14.7			
FEB	4.523	.162	.336		371.0				244.0				15.7			
MAR	8.386	.270	.866		219.0	156.0	28	5.2	154.0	43.0	72	9.3	8.5	7.4	12	
APR	10.916	.364	.781		175.0	56.0	68	12.9	171.0	25.0	85	15.9	9.5	3.1	67	.6
MAY	6.672	.215	.357		320.0	21.2	93	19.9	171.0	42.0	75	8.6	17.7	1.9	89	1.0
JUN	5.288	.176	.424		309.0				146.0				18.2			
JUL	4.551	.147	.522		325.0				292.0				14.3			
AUG	4.319	.139	.336		189.0				159.0				16.5			
SEP	6.706	.224	.603		188.0				65.0				3.8			
OCT	5.607	.181	.448		433.0				136.0				13.5			
NOV	4.628	.154	.435		500.0	12.0	97	22.5	336.0	22.0	93	14.5	13.6	1.6	88	.5
DEC	6.229	.201	.386			16.0				15.0				2.3		
TOTAL	73.933							60.5				48.3				2.1
AVERAGE		.203	MAXIMUM .866.		311.7	52.2	83		189.0	29.4	84		13.2	3.2	75	
NO. OF SAMPLES					30	47			30	47			29	48		

Waste Stabilization Pond

PROJECT : ENNISKILLEN TWP
(OIL CITY)

Cell Acreage : 5.4

Total Acreage : 5.4

Commenced Operation : May 1975

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

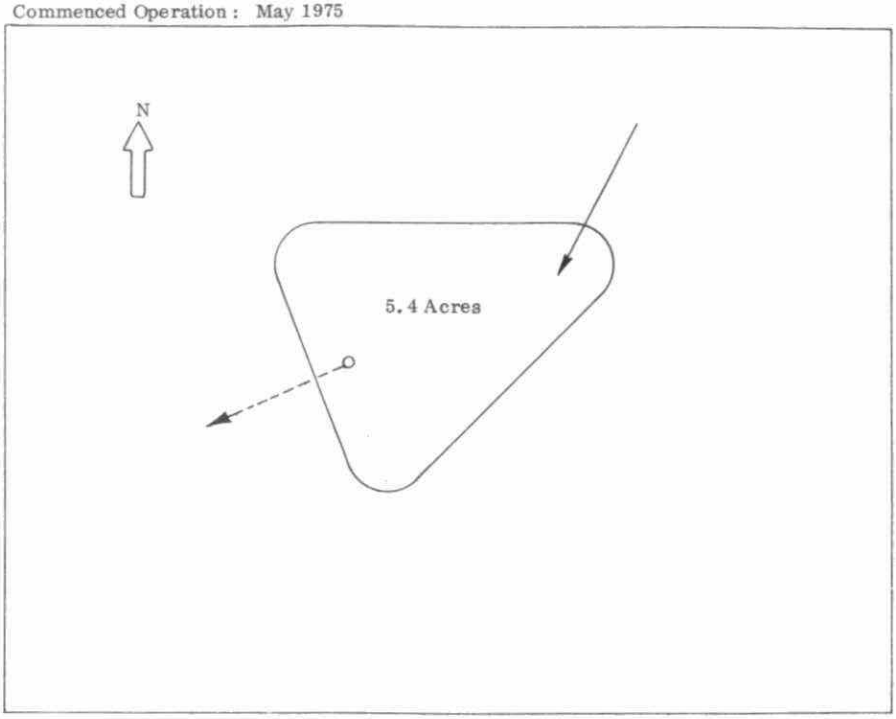
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 83 I gpm
Pump 2 : 83 I gpm

Total Cap : N./A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001738 OIL CITY LAGOON

MUNICIPALITY : ENNISKILLEN OIL CITY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION :

* COMMENT: NO DISCHARGE IN 1978
LAGOON CONSTRUCTION COMPLETED IN SUMMER OF 1975.

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.037 MIGD DESIGN BOD5 : MG/L DESIGN SUSP. SOLIDS : MG/L

<--- * FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	.391	.013	.029													
FEB	.303	.011	.017		220.0				126.0				10.6			
MAR	.507	.016	.039													
APR	.438	.015	.033		175.0				111.0				12.8			
MAY	.372	.012	.027													
JUN	.308	.010	.017		205.0				108.0				11.6			
JUL	.299	.010	.012		195.0				87.0				11.6			
AUG	.308	.010	.013		160.0				74.0				8.3			
SEP	.334	.011	.025													
OCT	.317	.010	.018		134.0				63.0				12.2			
NOV	.293	.010	.012		195.0				181.0				10.8			
DEC	.343	.011	.017		165.0				258.0				33.0			
TOTAL	4.213															
AVERAGE		.012	MAXIMUM .039		181.1				126.0				13.8			
NO. OF SAMPLES					8				8				8			

Waste Stabilization Pond

PROJECT : ESSEX (North-East)

Cell Acreage : 12 + 12

Total Acreage : 24

Commenced Operation : Approx. 1963/64

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

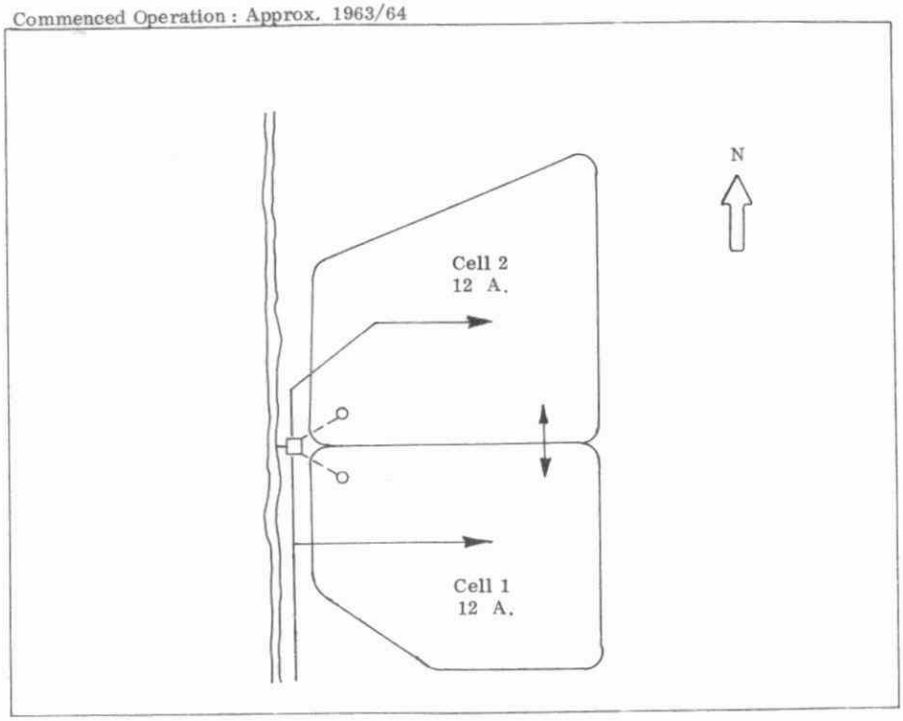
Flow Measurement :

- ☐ Flow Meter
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 1000 gpm
Pump 2 : 1000 gpm

Total Cap : 1000 gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000203 ESSEX LAGOON N.E.

MUNICIPALITY : ESSEX (N.E.)
REGION : 01 SOUTHWESTERN

CURRENT POPULATION : [illegible]259

TREATMENT FACILITY : CONVENTIONAL LAGOON
PHOSPHORUS REMOVAL

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.240 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	6.342	.204	.989		60.0				121.0				3.3			
FEB	3.903	.139	.374													
MAR	2.616	.084	.265		114.0				343.0				6.0			
APR	1.889	.063	.137		60.0	16.5	72	.8	46.0	148.5	-	-	4.6	.9	80	
MAY	2.963	.095	.267		90.0	23.2	74	1.9	28.0	266.7	-	-	6.5	1.3	79	.1
JUN	3.058	.102	.245													
JUL	1.647	.053	.150		116.0				172.0				5.0			
AUG	2.858	.092	.165		62.0				33.0				5.4			
SEP	3.468	.116	.255		125.0				902.0				8.2			
OCT	3.318	.107	.184		32.0				21.0				5.6			
NOV	3.790	.126	.205		56.0				46.0				5.3			
DEC	7.683	.248	.529													
TOTAL	43.535							2.7								.1
AVERAGE		.119	MAXIMUM .989		79.4	19.8	75		190.2	207.6	-		5.5	1.1	79	
NO. OF SAMPLES					9	6			9	6			9	6		

Waste Stabilization Pond

PROJECT : ESSEX (South-West)

Cell Acreage : 12 + 12 + 12

Total Acreage : 36

Commenced Operation : July 1972

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

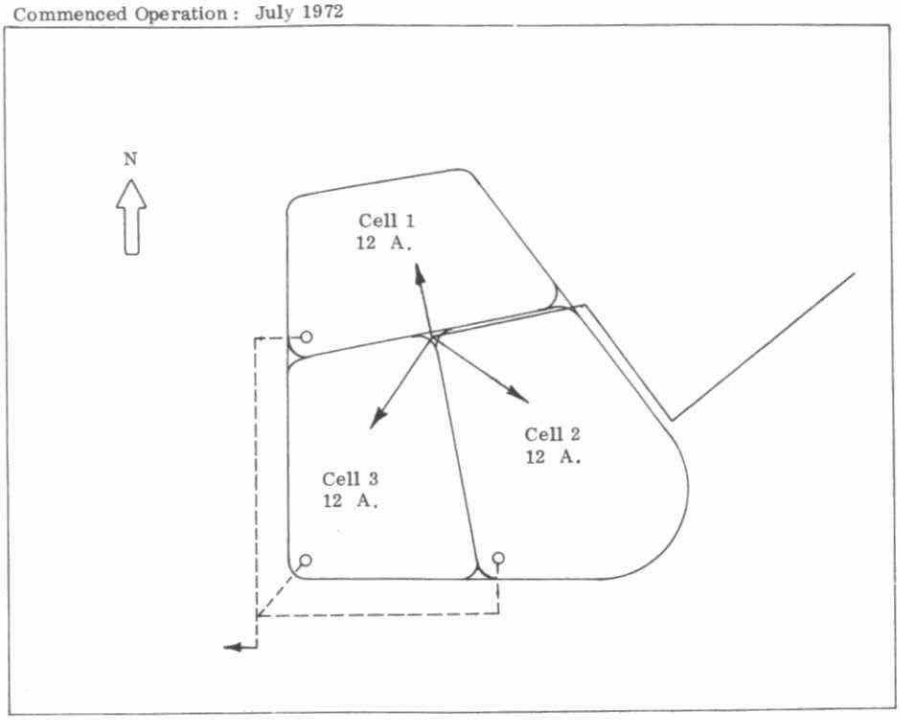
Flow Measurement :

- □ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 1200 I gpm
Pump 2 : 1200 I gpm

Total Cap : 1200 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000837 ESSEX LAGOON S.W.

MUNICIPALITY : ESSEX (S.W.)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON
PHOSPHORUS REMOVAL

CURRENT POPULATION : 6,259

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.360 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	14.047	.431	1.909		76.0				45.0				4.5			
FEB	6.631	.236	.993													
MAR	18.508	.597	2.329		114.0				53.0				5.5			
APR	7.005	.234	.531		12.0	17.0	-	-	79.0	57.5	27	1.5	1.8	.6	66	
MAY	6.102	.197	.510		175.0	12.2	93	9.9	162.0	32.0	80	7.9	9.2	.7	91	.5
JUN	11.189	.373	.690													
JUL	2.758	.089	.576		64.0	2.8	95	1.6	32.0	3.0	90	.8	4.7	.4	91	.1
AUG	2.276	.073	.565		70.0	2.8	96	1.5	38.0	6.0	84	.7	6.2	.5	91	.1
SEP	2.823	.091	.829		125.0	2.4	98	3.4	100.0	5.0	95	2.6	4.9	.8	82	.1
OCT	11.268	.363	.926		165.0	4.8	97	18.0	1677.0	15.0	99	187.2	10.7	1.3	87	1.0
NOV	10.187	.340	.457		176.0	7.7	95	17.1	289.8	20.9	92	27.3	8.3	.1	98	.8
DEC	14.600	.470	.850													
TOTAL	107.394							51.5				228.0				2.6
AVERAGE		.291	MAXIMUM 2.329		108.5	7.1	93		275.0	19.9	92		6.2	.6	89	
NO. OF SAMPLES					13	25			13	25			13	23		

Waste Stabilization Pond

PROJECT : FOREST

Cell Acreage : 12.6 + 14.0 + 13.4

Total Acreage : 40

Commenced Operation : Dec. 1972

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

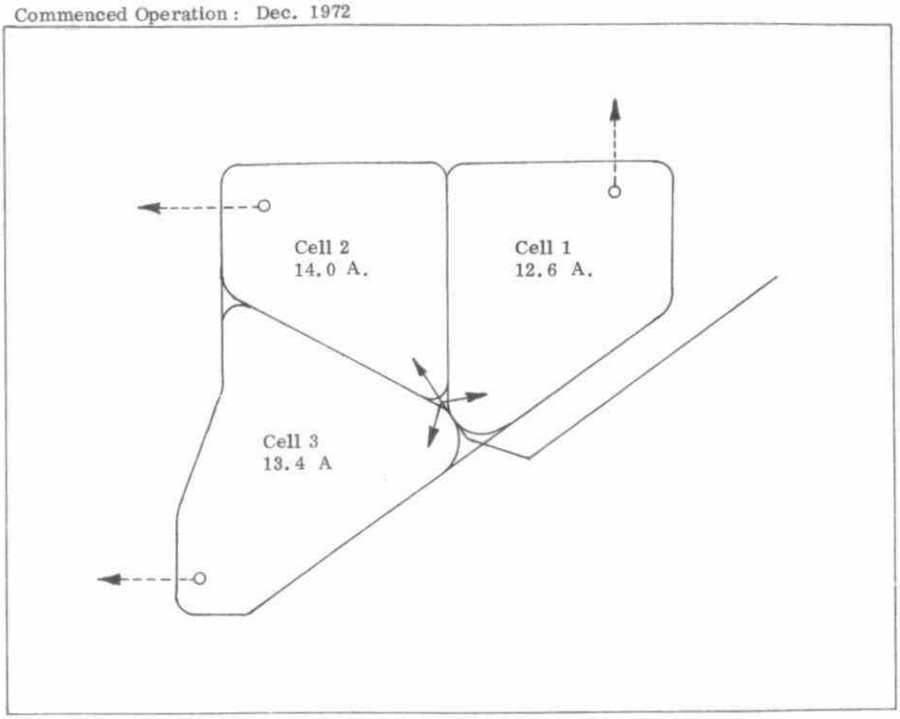
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 620 I gpm
Pump 2 : 620 I gpm

Total Cap : 775 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001346 FOREST LAGOON

MUNICIPALITY : FOREST
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 2,679

* COMMENT: NO DISCHARGE IN 1978

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP. SOLIDS : MG/L

	<--- * FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	5.027	.162	.232													
FEB	4.198	.150	.168													
MAR	5.670	.182	.272													
APR	5.942	.198	.253													
MAY	5.100	.164														
JUN	4.400	.147	.186													
JUL	4.094	.132	.158		190.0				158.0				14.6			
AUG	4.052	.130	.158													
SEP	4.347	.145	.180													
OCT	4.229	.134	.151													
NOV	4.167	.139	.166													
DEC	4.427	.143	.170		180.0				139.0				11.8			
TOTAL	55.653															
AVERAGE		.152	MAXIMUM .272		185.0				148.5				13.2			
NO. OF SAMPLES					2				2				2			

Waste Stabilization Pond

PROJECT : GLENCOE

Cell Acreage : 14.0 + 14.0

Total Acreage : 28.0

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal: YES

- ☐ Batch
- ☐ Continuous
- ☐ None

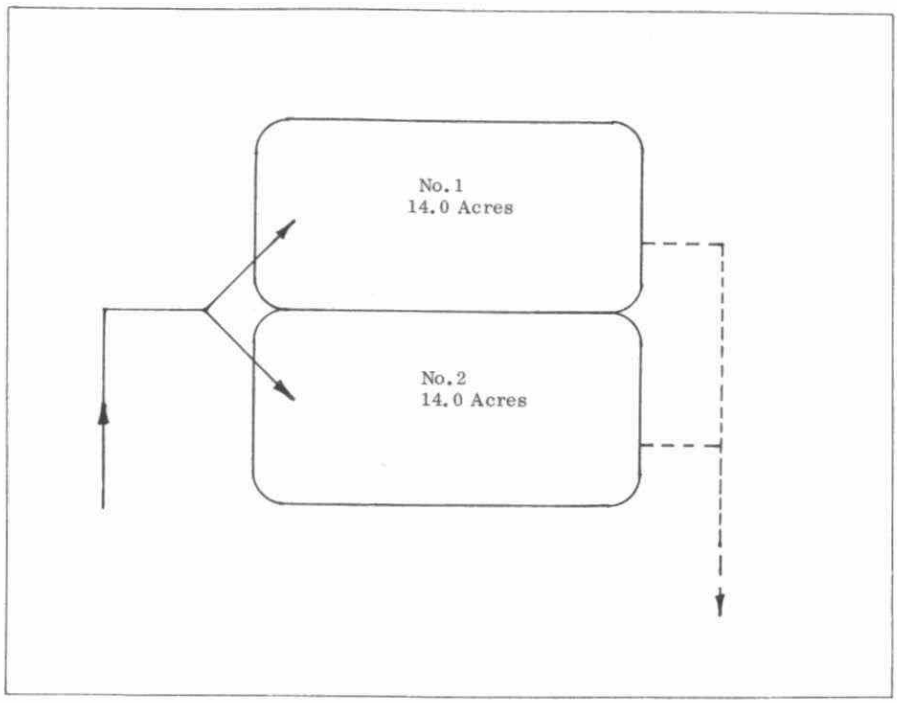
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 486 Igpm
Pump 2 : 486 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001845 GLENCOE LAGOON

MUNICIPALITY : GLENCOE
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL * COMMENT: NO DISCHARGE IN 1978

CURRENT POPULATION : 1,743

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- * FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	* INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	* INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	* INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	1.915	.061	.084													
FEB	1.590	.056	.065													
MAR	3.569	.115	.305													
APR	2.608	.086	.161		198.0				135.0				10.2			
MAY	2.013	.065	.103													
JUN	1.719	.057	.081		178.0				183.0							
JUL	1.711	.055	.066		172.0				125.0				13.1			
AUG	1.751	.056	.075													
SEP	2.037	.068	.112													
OCT	2.079	.067	.108													
NOV	2.470	.082	.124													
DEC	2.478	.080	.148													
TOTAL	25.940															
AVERAGE		.071	MAXIMUM .305		182.6				147.6				11.6			
NO. OF SAMPLES					6				6				4			

Waste Stabilization Pond

PROJECT : (COTTAM) GOSFIELD

Cell Acreage : 10.0 : 10.0

Total Acreage : 20.0

Commenced Operation: JUN 1976

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- □ Continuous
- □ Annual
- ■ Other : Semi-annual

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

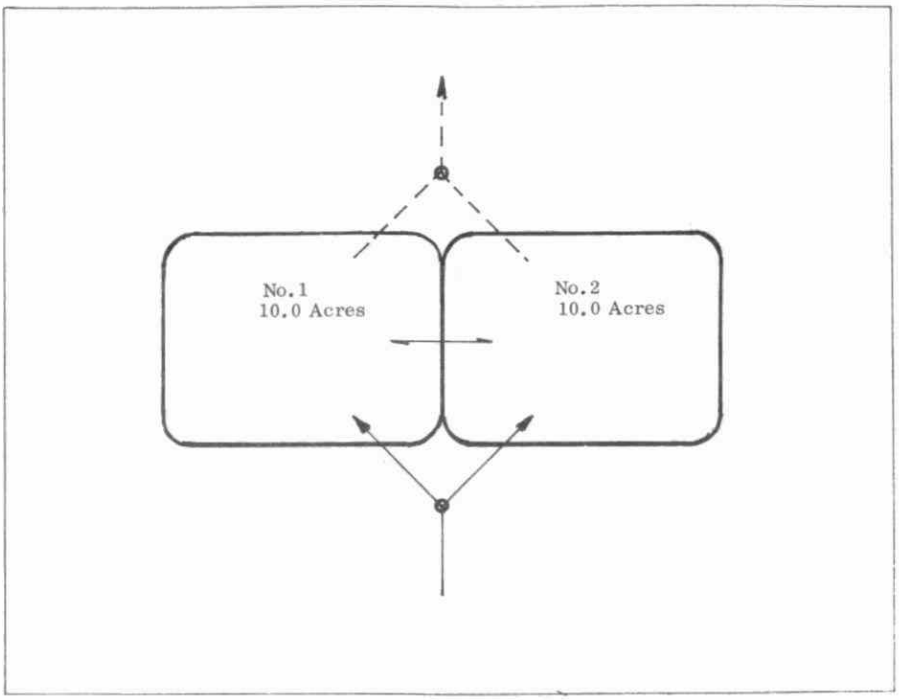
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 370 (U.S.)gpm
Pump 2 : 370(U.S.)gpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002005 COTTAM LAGOON

MUNICIPALITY : GOSFIELD N. PV COTTAM
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL * COMMENT: NO DISCHARGE IN 1978

CURRENT POPULATION : 850

LAGOON CONSTRUCTION COMPLETED IN SUMMER OF 1976

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- * FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY * MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.412	.045														
FEB	1.181	.042	.087													
MAR	2.003	.064	.202													
APR	1.668	.056	.087													
MAY	1.627	.052	.144													
JUN	1.344	.044	.053													
JUL	1.184	.038	.051													
AUG	1.077	.035	.047						42.0				4.8			
SEP	1.127	.038	.046													
OCT	1.227	.040	.056													
NOV	1.665	.056	.149													
DEC	1.214	.039	.063													
TOTAL	16.729															
AVERAGE		.046	MAXIMUM .202						42.0				4.8			
NO. OF SAMPLES									1				1			

Waste Stabilization Pond

PROJECT : HARROW

Cell Acreage : 15.0 + 15.0 + 15.0

Total Acreage : 45.0

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : Series-parallel

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal: YES

- ■ Batch
- ☐ Continuous
- ☐ None

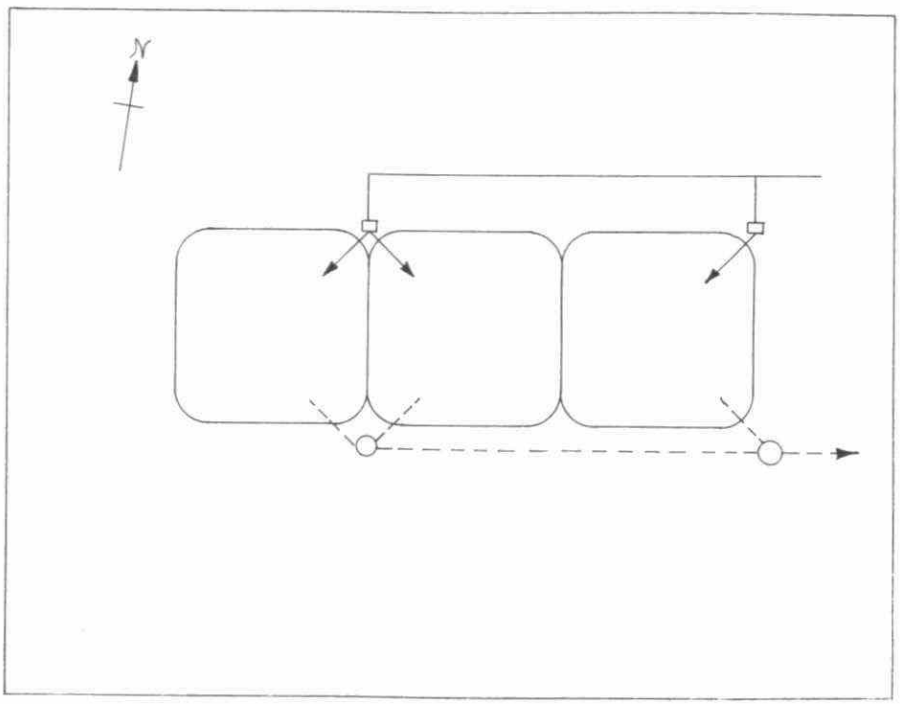
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002103 HARROW LAGOON

MUNICIPALITY : HARROW
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON
PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,039

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.450 MIGD DESIGN BOD5 : 250.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	5.518	.178	.470		120.0				229.0				8.0			
FEB	4.333	.155	.280		1180.0				2946.0				22.5			
MAR	7.601	.245	.250		430.0				2334.0				11.5			
APR	6.232	.208	.312		2150.0	19.0	99	132.8	6296.0	13.5	99	391.5	62.0	.4	99	3.8
MAY	5.886	.190	.229		275.0	20.5	92	14.9	356.0	11.5	96	20.2	8.9	.4	95	.4
JUN	5.602	.187	.210		18.8				21.0				1.9			
JUL	5.221	.168	.229		14.0				13.0				1.6			
AUG	5.489	.177	.210		11.4	2.9	74	.4	31.0	10.0	67	1.1	1.5	.1	92	
SEP	5.236	.175	.197		68.0	2.4	96	3.4	60.0	17.0	71	2.2	4.4	.4	88	.2
OCT	5.106	.165	.191		35.0	1.5	95	1.7	35.0	14.2	59	1.0	3.5	.5	85	.1
NOV	5.166	.172	.229		12.5	1.6	87	.5	33.0	13.9	57	.9	1.6	.9	43	
DEC	5.820	.188	.268		9.0	1.4	84	.4	15.0	6.8	54	.4	1.9	1.5	20	
TOTAL	67.210							154.1				417.3				4.5
AVERAGE		.184	MAXIMUM .470		360.3	7.0	98		1030.7	12.4	98		10.7	.6	94	
NO. OF SAMPLES					12	22			12	19			12	20		

Waste Stabilization Pond

PROJECT : HENSALL

Cell Acreage : 12.05 + 12.68 + 12.15

Total Acreage : 36.88

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ■ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

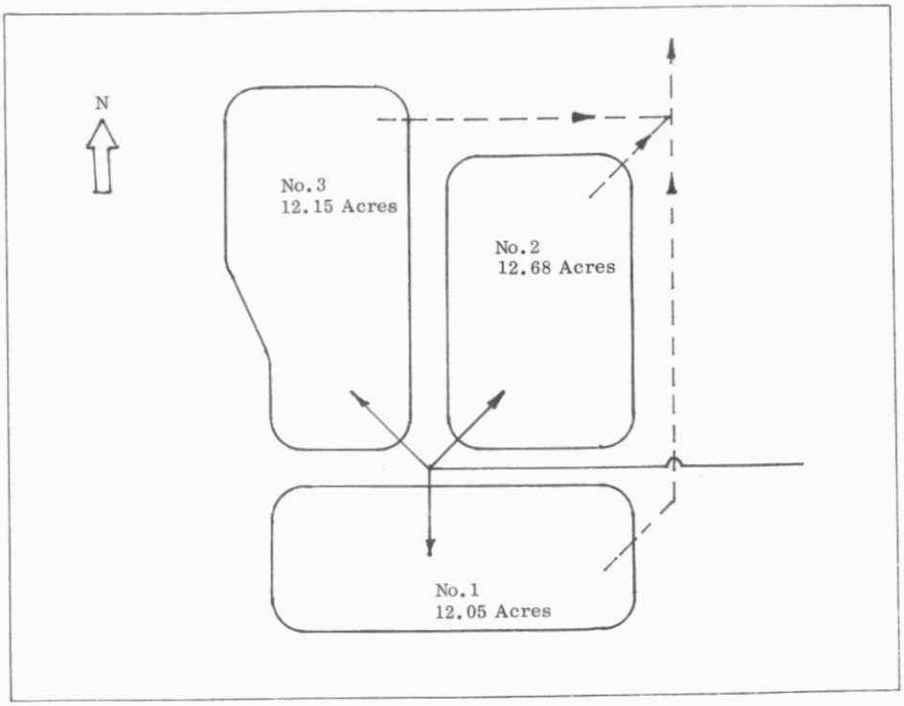
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 335 Igpm
Pump 2 : 335 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000926 HENSALL LAGOON

MUNICIPALITY : HENSALL
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,005

* COMMENT: NO DISCHARGE IN 1978
LAGOON CONSTRUCTION COMPLETED IN FALL OF 1976

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.125 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- * FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	1.886	.061	.073													
FEB	1.647	.058	.065													
MAR	2.636	.085	.170													
APR	2.835	.095	.185													
MAY	2.099	.067	.136													
JUN	2.010	.067	.081													
JUL	1.768	.057	.066													
AUG	1.674	.054	.080													
SEP	2.084	.069	.134													
OCT	2.418	.078	.127													
NOV	2.295	.076	.106													
DEC	2.644	.085	.117													
TOTAL	25.996															
AVERAGE		.071	MAXIMUM .185													
NO. OF SAMPLES																

Waste Stabilization Pond

PROJECT : LUCAN

Cell Acreage : 5 + 5

Total Acreage : 10

Commenced Operation (Cell 1) : 1964
Expansion (Cell 2) : 1972

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

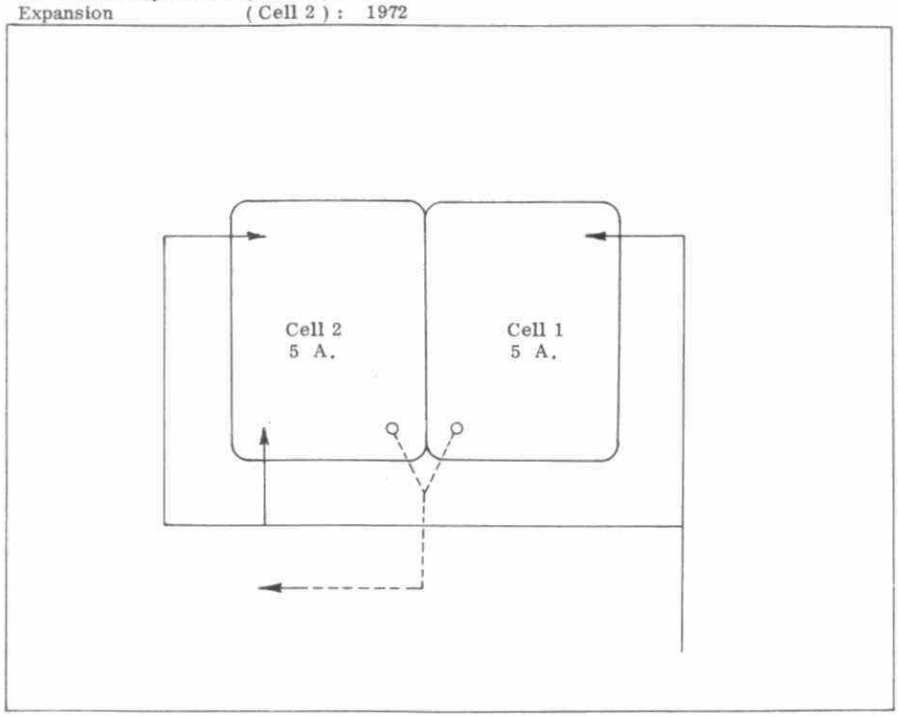
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 300 I gpm
Pump 2 : 300 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000855 LUCAN LAGOON

MUNICIPALITY : LUCAN
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 1,547

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.083 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.196	.130	.504		123.0	30.0	75	3.9	111.0	11.0	90	4.1	6.4	3.4	46	.1
FEB	2.612	.093	.504		96.0	44.0	54	1.3	122.0	10.0	91	2.9	6.3	3.7	41	
MAR	7.416	.239	.867		112.0	65.0	41	3.4	91.0	9.0	90	6.0	6.5	5.5	15	
APR	9.156	.305	1.008			19.0								1.9		
MAY	4.396	.141														
JUN	4.676	.156	.340		150.0				137.0				8.5			
JUL	2.758	.089	.119		106.0				127.0							
AUG	2.276	.073	.540		116.0				112.0				6.6			
SEP	2.823	.091														
OCT	3.001	.097	.540			4.0				5.0				3.7		
NOV	4.746	.158	.540		315.0	1.2	99	14.8	87.0	4.0	95	3.9	5.4	3.3	38	.1
DEC	5.321	.172	.525		150.0	5.0	96	7.7	254.0	3.0	98	13.3	6.4	3.9	39	.1
TOTAL	53.377							31.1				30.2				.3
AVERAGE		.145	MAXIMUM 1.008		146.0	24.0	83		130.1	7.0	94		6.5	3.6	44	
NO. OF SAMPLES					10	10			10	9			9	9		

Waste Stabilization Pond

PROJECT : MILVERTON

Cell Acreage : 15.0

Total Acreage : 15.0

Commenced Operation : Mar. 1967

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ■ Continuous
- ☐ None

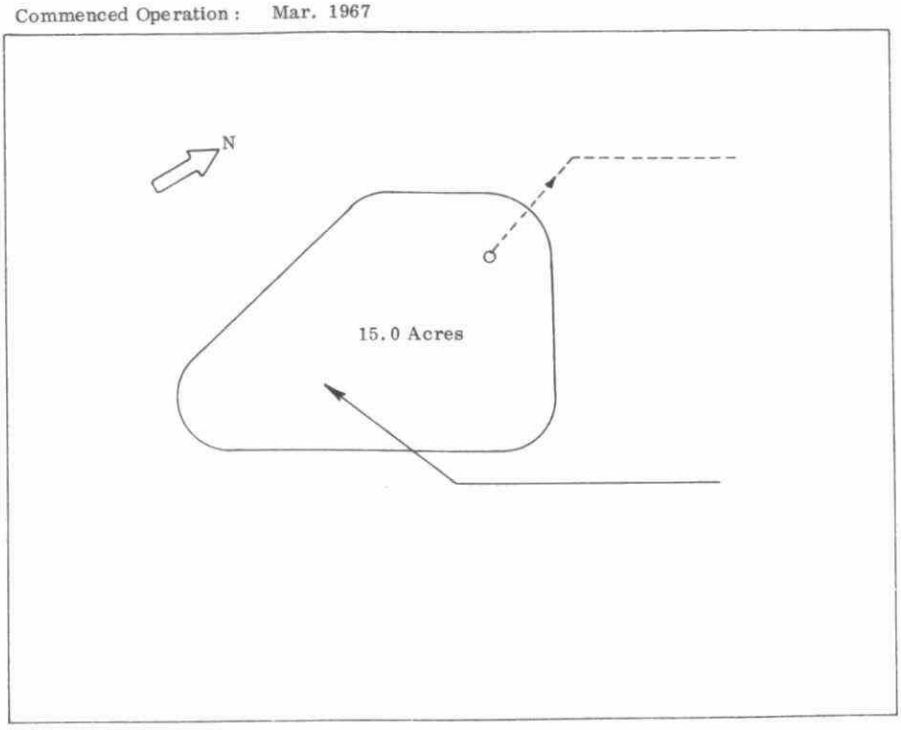
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 367 Igpm
Pump 2 : 367 Igpm

Total Cap : N/A



Signifigant Industries : Glitz Cheese

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001079 MILVERTON LAGOON

MUNICIPALITY : MILVERTON
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,469

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.080 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.318	.107			369.0				313.0				11.1			
FEB	3.001	.107			285.0				292.0				7.9			
MAR	4.974	.160			118.0				135.0				3.2			
APR	4.800	.160	.233		220.0	118.0	46	4.8	232.0	35.0	84	9.4	22.9	2.2	90	.9
MAY	3.323	.107	.195		1150.0				477.0				19.8			
JUN	2.618	.087	.151		485.0				263.0				9.9			
JUL	2.446	.079	.141		1030.0				299.0				23.9			
AUG	3.119	.101			103.0				138.0				40.6			
SEP	4.820	.160	.484		1400.0				472.0				20.0			
OCT	3.757	.121	.310		655.0				305.0				16.1			
NOV	3.662	.122	.211		1110.0				491.0				22.8			
DEC	5.069	.163	.229		275.0				254.0				7.7			
TOTAL	44.907							4.8				9.4				.9
AVERAGE		.123	MAXIMUM .484		600.0	118.0	80		305.9	35.0	88		17.1	2.2	87	
NO. OF SAMPLES					21	1			21	1			23	1		

Waste Stabilization Pond

PROJECT : MITCHELL

Cell Acreage : 21 + 21 + 25.5

Total Acreage : 67.5

Commenced Operation : Aug. 1961

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal (When Possible)
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

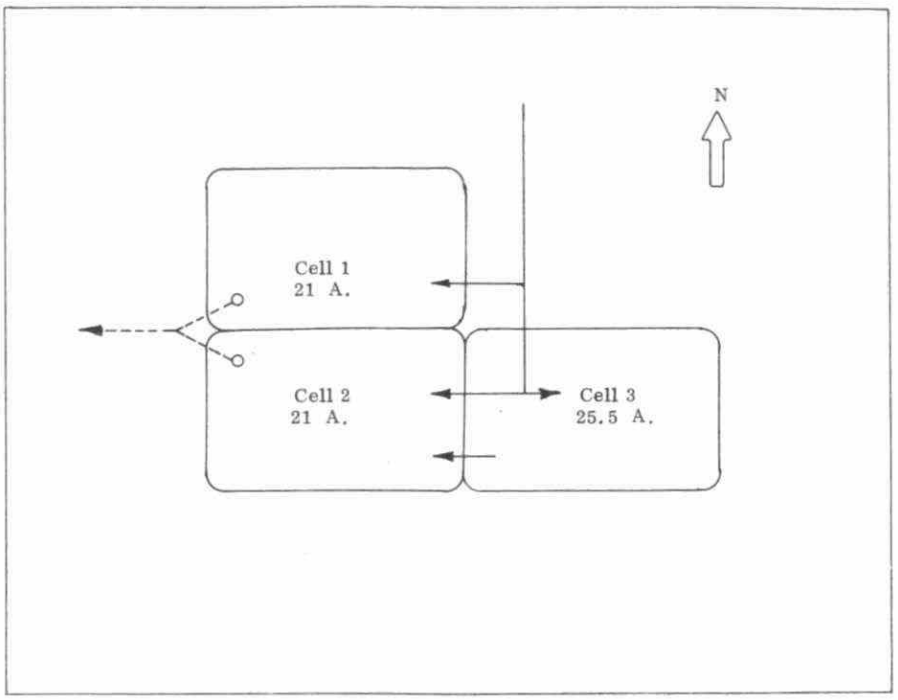
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 1022 Igpm
Pump 2 : 671 Igpm

Total Cap : N/A



Signifigant Industries : Stacey Bros Ltd (Creamery)

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000472 MITCHELL LAGOON

MUNICIPALITY : MITCHELL
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,750

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.670 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	17.000	.550														
FEB	15.400	.550			136.0	71.0	47	10.0	107.0	6.0	94	15.5	7.2	5.9	18	.2
MAR	18.226	.729			26.0	46.0	-	-	13.0	11.0	15	.3	1.2	5.7	-	-
APR	23.173	.858			55.0	33.0	40	5.0	68.0	26.0	61	9.7	3.1	3.5	-	-
MAY	9.824	.317			210.0	20.0	90	18.6	58.0	53.0	8	.4	8.5	1.1	87	.7
JUN	13.238	.441			145.0				53.0				15.2			
JUL	7.793	.251			135.0				59.0				7.1			
AUG	8.273	.267			880.0				210.0				18.2			
SEP	17.738	.591			48.0				32.0				10.0			
OCT	24.485	.790			116.0	17.0	85	24.2	41.0	56.0	-	-	6.2	1.1	82	1.2
NOV	16.903	.563				20.0				24.0				2.6		
DEC	19.080	.615														
TOTAL	191.133							57.8				25.9				2.1
AVERAGE			MAXIMUM .544		194.5	34.5	82		71.2	29.3	58		8.5	3.3	61	
NO. OF SAMPLES					12	17			12	15			12	15		

Waste Stabilization Pond

PROJECT : MOORE TWP. (BRIGDEN)

Cell Acreage : 10 + 10

Total Acreage : 20

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ■ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

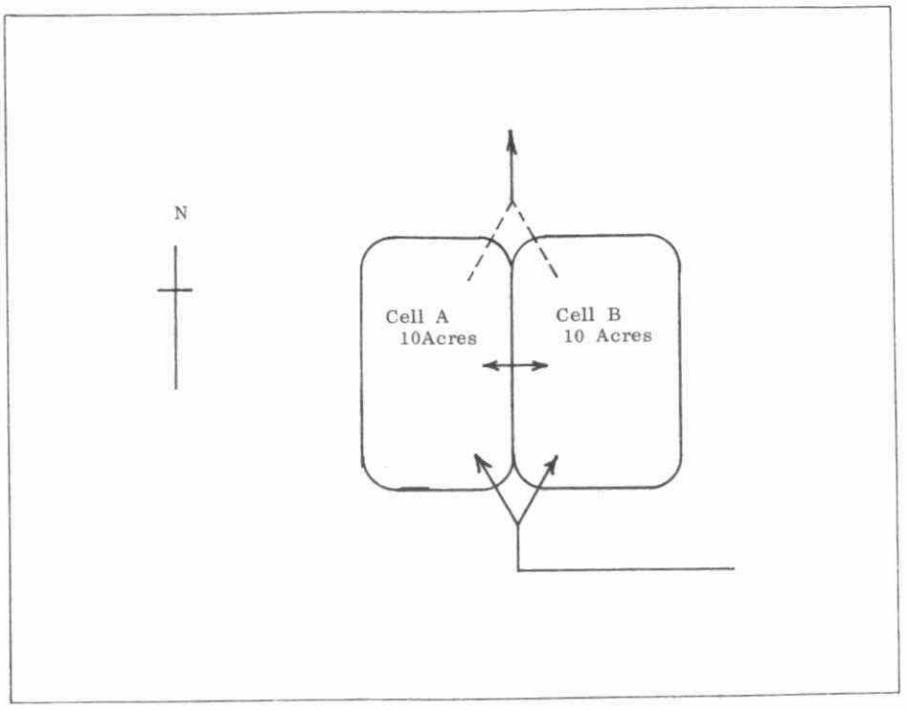
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 265 Igpm
Pump 2 : 265 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002023 — BRIGDEN POLICE VILLAGE LAGOON

MUNICIPALITY : MOORE (BRIGDEN)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 500

COMMENT: LAGOON CONSTRUCTION COMPLETED IN FALL 1976

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.075 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.943	.030														
FEB	.876	.031														
MAR	1.665	.053														
APR	1.089	.036			140.0	7.0	95	1.4	231.0	27.0	88	2.2	12.1	1.9	84	.1
MAY	.959	.031			88.0	20.0	77	.6	40.0	43.0	-	-	5.9	1.5	74	
JUN	.580	.019			120.0	9.2	92	.6	122.0	12.0	90	.6	7.6	.8	88	
JUL	.523	.016			195.0				121.0				47.0			
AUG	.550	.018			110.0				46.0				6.8			
SEP	.643	.021			110.0				60.0				8.5			
OCT	.655	.021			110.0				91.0				4.8			
NOV	.604	.020			130.0				70.0				7.9			
DEC	.660	.023			82.0				82.0				1.9			
TOTAL	9.747							2.6				2.8				.1
AVERAGE		.027	MAXIMUM		120.5	12.0	89		95.8	27.3	71		11.3	1.4	87	
NO. OF SAMPLES					9	3			9	3			9	3		

Waste Stabilization Pond

PROJECT : NORWICH

Cell Acreage : 15 + 15

Total Acreage : 30

Commenced Operation (Cell 1) : May 1974
Expansion : (Cell 2) : Spring 1976

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- ■ Continuous
- □ None

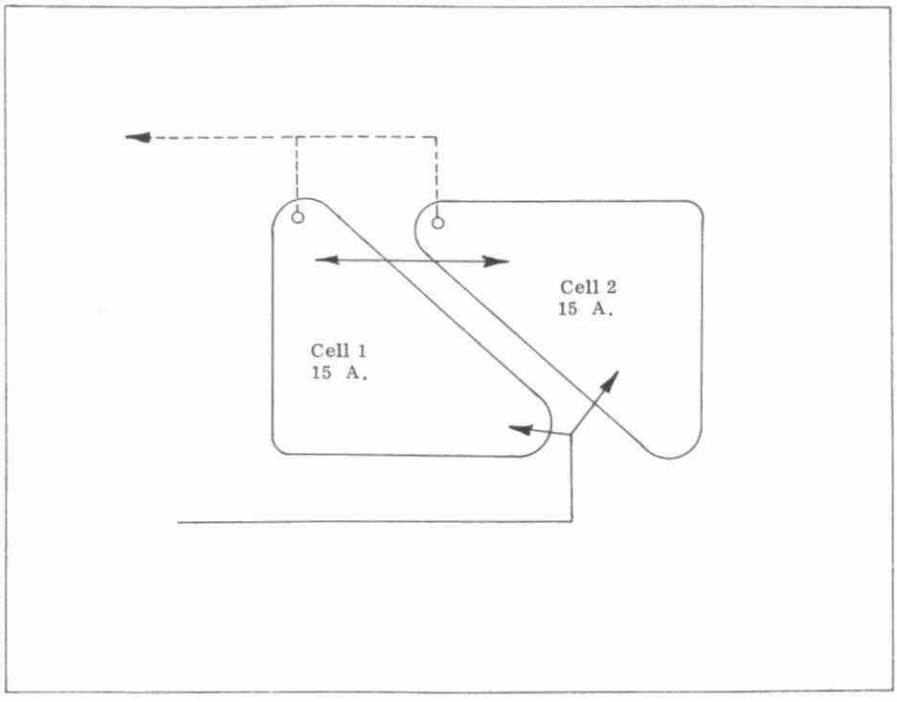
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 800 I gpm
Pump 2 : 800 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001480 NORWICH LAGOON

MUNICIPALITY : NORWICH
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 9,795

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.280	.143	.200		620.0	7.0	98	26.2	1636.0	8.0	99	69.6	7.0	1.4	80	.2
FEB	3.180	.114	.140		88.0				73.0				6.2			
MAR	7.280	.234	.130		92.0				110.0				7.2			
APR	6.760	.225	.450													
MAY	4.200	.135	.200													
JUN	3.190	.106	.140		92.0				74.0				5.7			
JUL	2.810	.091	.120		106.0				111.0				7.4			
AUG	2.910	.094	.120		64.0				75.0	1.0	98	2.1	7.2			
SEP	3.450	.115	.440		140.0				372.0				10.4			
OCT	3.640	.117	.150		340.0				505.0				7.9			
NOV	3.710	.124	.190		58.0	22.0	62	1.3	67.0	40.0	40	1.0	5.0	1.0	80	.1
DEC	4.370	.141	.210		140.0	9.0	93	5.7	319.0	9.0	97	13.5	5.3	.4	92	.2
TOTAL	49.780							35.7				87.7				.6
AVERAGE		.137	MAXIMUM .450		174.0	12.5	92		334.2	16.4	95		6.9	1.1	83	
NO. OF SAMPLES					10	4			10	5			10	4		

Waste Stabilization Pond

PROJECT : OIL SPRINGS

Cell Acreage : 7.0 + 7.0

Total Acreage : 14.0

Commenced Operation : November 1976

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

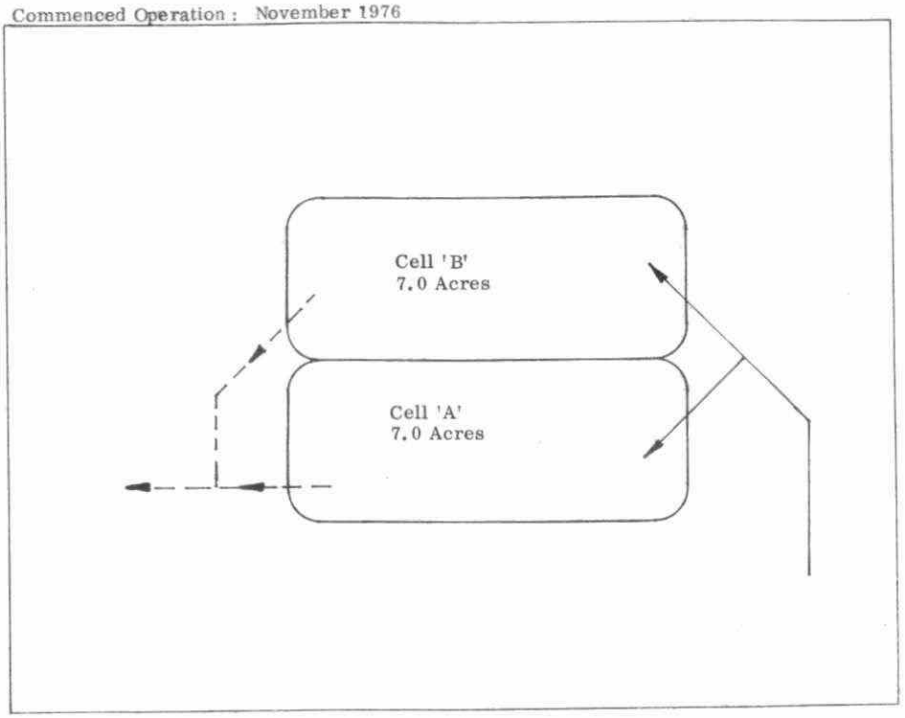
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001998 — OIL SPRINGS LAGOON

MUNICIPALITY : OIL SPRINGS
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 675

COMMENT: LAGOON CONSTRUCTION COMPLETED FALL 1976

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.100 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.048	.035	.058													
FEB	.971	.034	.096													
MAR	2.099	.068	.078													
APR	1.186	.039	.058		108.0	35.0	67	.8	108.0	46.0	57	.7	7.6	2.1	72	
MAY	1.024	.033	.051													
JUN	.949	.032	.045		70.0				92.0	433.0	-	-	8.2			
JUL	.933	.030	.062		64.0				77.0				8.9			
AUG	.927	.030	.035		74.0				62.0				6.7			
SEP	.926	.031	.042													
OCT	.996	.032	.046		96.0				63.0				8.1			
NOV	.946	.031	.041		155.0				213.0				10.0			
DEC	1.180	.036	.051		130.0				160.0				8.2			
TOTAL	13.185							.8				.7				
AVERAGE		.036	MAXIMUM .096		99.5	35.0	64		110.7	239.5	-		8.2	2.1	74	
NO. OF SAMPLES					7	1			7	2			7	1		

Waste Stabilization Pond

PROJECT : PORT STANLEY

Cell Acreage : 10 + 10 + 10 + 10

Total Acreage : 40

Commenced Operation : Jan. 1973

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

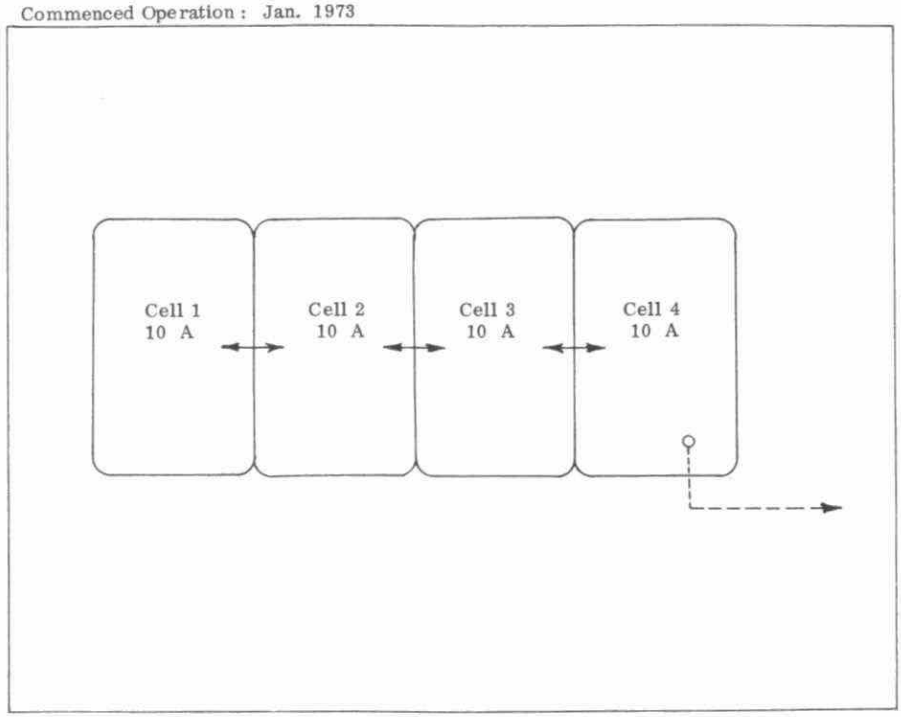
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 1000 US gpm
Pump 2 : 1000 US gpm

Total Cap : 1500 US gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001373 PORT STANLEY LAGOON

MUNICIPALITY : PORT STANLEY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,902

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.323 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.610	.149			492.0				189.0				12.9			
FEB	4.230	.151			308.0				992.0				12.0			
MAR	7.180	.232			238.0				748.0				9.5			
APR	5.998	.193			53.0	10.2	80	2.5	48.5	14.8	69	2.0	3.1	1.9	36	
MAY	5.342	.172			62.0	13.3	78	2.6	42.0	32.3	23	.5	3.9	.5	86	.1
JUN	4.960	.165	.182		41.0				31.5				2.9			
JUL	4.853	.156	.750		82.0				75.5				4.5			
AUG	5.617	.181			91.3				111.0				4.8			
SEP	4.815	.161	.243		270.0				317.3				8.3			
OCT	4.110	.133	.275		108.0	1.7	98	4.3	78.0	6.3	91	2.9	5.1	.6	86	.1
NOV	3.795	.127	.147		107.0				87.5				6.1			
DEC	4.400	.142	.193		96.0				139.0				5.1			
TOTAL	59.910							9.4				5.4				.2
AVERAGE		.164	MAXIMUM .750		162.3	8.4	94		238.2	17.8	92		6.5	1.0	83	
NO. OF SAMPLES					25	14			25	14			25	14		

Waste Stabilization Pond

PROJECT : RALEIGH & TILBURY EAST (P.V. MERLIN)

Cell Acreage : 14.0 + 13.5

Total Acreage : 27.5

Commenced operation: OCT 1976

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

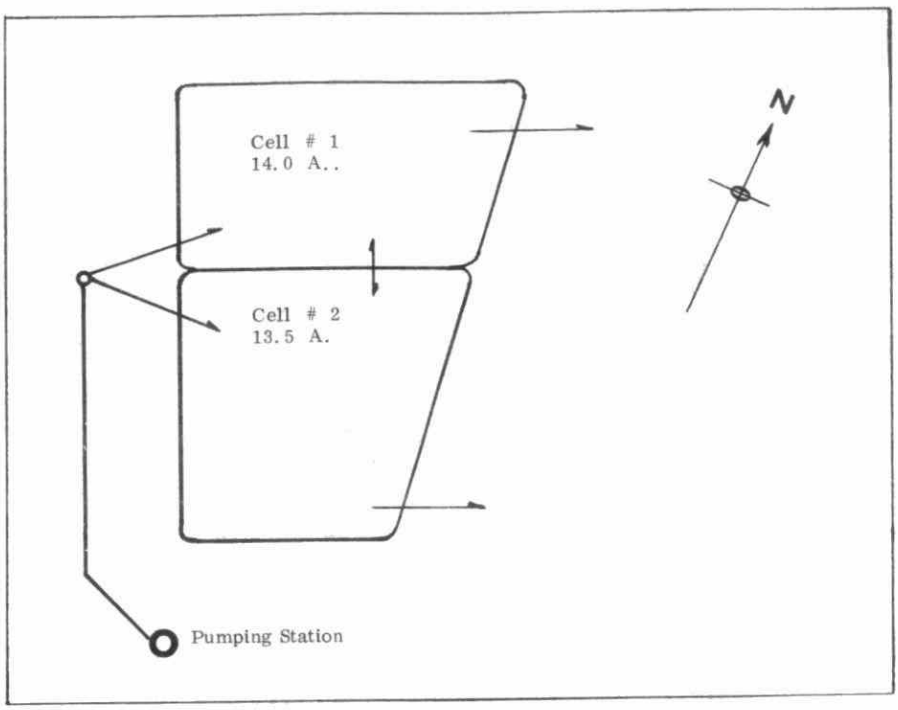
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 290 Igpm
Pump 2 : 290 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000935 MERLIN POLICE VILLAGE LAGOON

MUNICIPALITY : RALEIGH TILBURY E. MERLIN
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,300

* COMMENT: NO DISCHARGE IN 1978
LAGOON CONSTRUCTION COMPLETED IN FALL 1976

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.205 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.934	.030	.063													
FEB	.801	.028	.049		500.0				682.0				17.0			
MAR	1.767	.057	.267		54.0				47.0				3.2			
APR	1.173	.039	.068													
MAY	1.065	.034	.050		240.0				138.0				19.0			
JUN	.936	.031	.063		220.0				165.0				10.8			
JUL	.882	.028	.057													
AUG	.889	.029	.049		210.0				108.0				8.1			
SEP	.919	.031	.050		300.0				522.0				5.3			
OCT	.968	.031	.060		150.0				164.0				6.8			
NOV	.896	.030	.056													
DEC	1.019	.033	.060		175.0				159.0				6.4			
TOTAL	12.249															
AVERAGE		.033	MAXIMUM .267		231.1				248.1				9.5			
NO. OF SAMPLES					8				8				8			

Waste Stabilization Pond

PROJECT : RIDGETOWN

Cell Acreage : 13.5 + 13.0 + 13.0

Total Acreage : 39.5

Commenced Operation : Sept. 1973

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

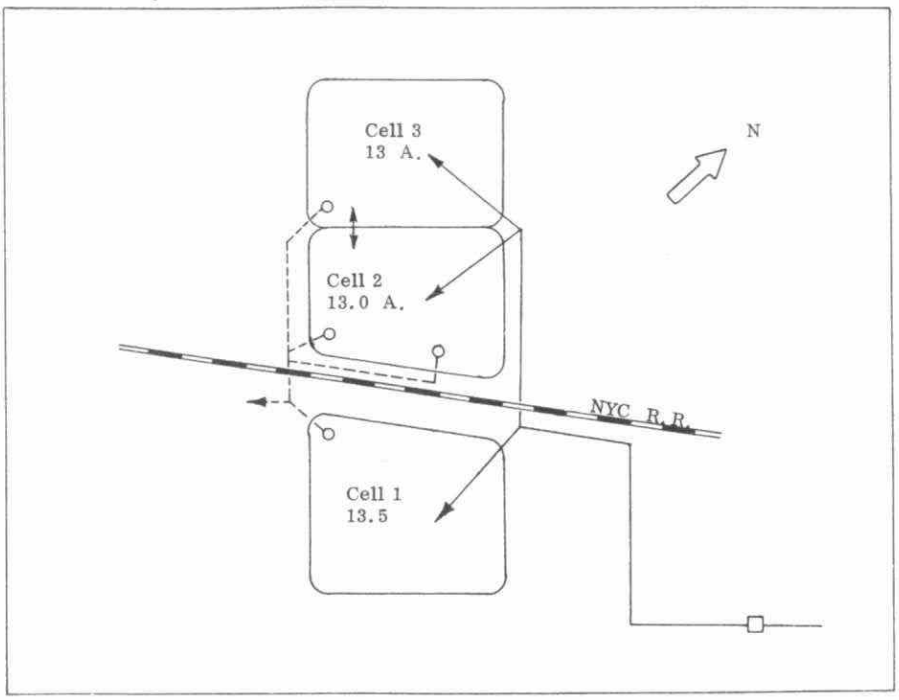
Flow Measurement :

- □ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 875 I gpm
Pump 2 : 875 I gpm

Total Cap : 875 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001364 RIDGETOWN LAGOON

MUNICIPALITY : RIDGETOWN
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 3,214

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.350 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->										
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	6.043	.195	.232		155.0				175.0				8.0			
FEB	4.760	.170	.215		*				*				*			
MAR	7.063	.227	.352		*				*				*			
APR	9.178	.306	.888		*				*				*			
MAY	7.458	.241			*	32.0			*	44.0			*	.5		
JUN	5.478	.183			124.0				68.0				8.4			
JUL	4.912	.158	.262		*				*				*			
AUG	4.307	.139	.198		*				*				*			
SEP	4.262	.142	.200		*				*				*			
OCT	4.567	.147	.199		*				*				*			
NOV	4.365	.145	.188		175.0				118.0				11.5			
DEC	4.810	.155	.207		*				*				*			
TOTAL	67.203															
AVERAGE		.184	MAXIMUM .888		151.3	32.0	78		120.3	44.0	63		9.3	.5	94	
NO. OF SAMPLES					3	1			3	1			2	1		

Waste Stabilization Pond

PROJECT : RODNEY

Cell Acreage : 16

Total Acreage : 16

Commenced Operation : March 1975

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

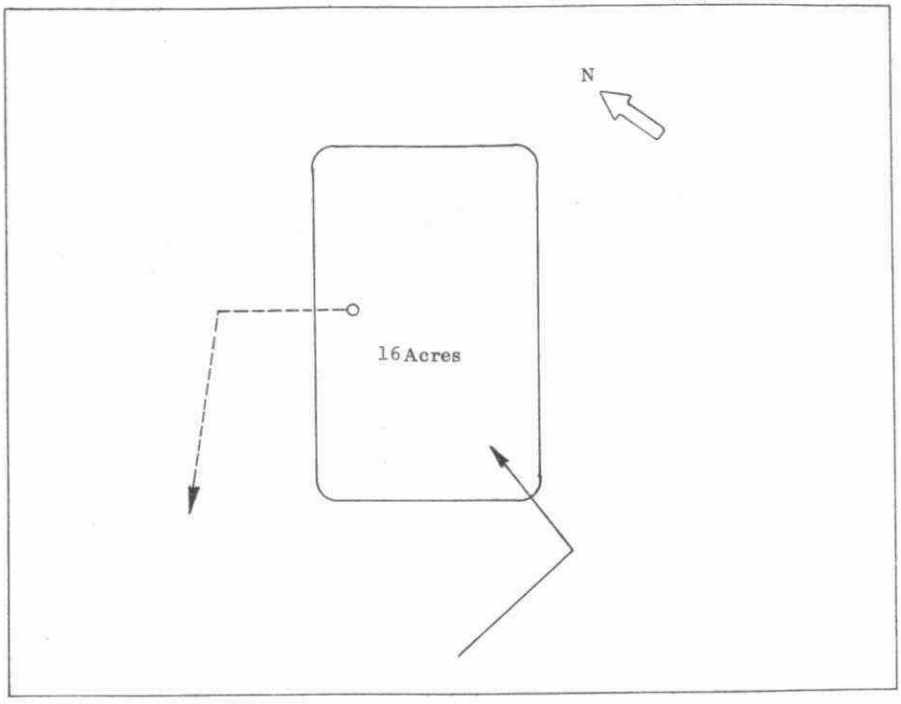
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 520 I gpm
Pump 2 : 520 I gpm

Total Cap : 520 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001667 RODNEY LAGOON

MUNICIPALITY : RODNEY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,017

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.120 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.990	.064	.073		350.0				126.0				9.3			
FEB	1.553	.055	.061		190.0				312.0				7.7			
MAR	2.285	.073	.125		730.0				530.0				12.0			
APR	2.433	.081	.103		253.0				274.0				5.5			
MAY	2.162	.070	.082		53.0	35.6	32	.3	34.5	103.0	-	-	5.2	1.3	74	
JUN	1.873	.062	.067		295.0				140.0				14.7			
JUL	1.691	.055	.065		1020.0				596.0				14.0			
AUG	1.677	.054	.063		330.0				614.0				7.3			
SEP	1.582	.053	.058		243.0				145.0				9.7			
OCT	1.663	.054	.067		360.0				3455.0				7.8			
NOV	1.562	.052	.058		305.0				872.0				9.7			
DEC	1.786	.058	.072		145.0				144.0				7.5			
TOTAL	22.257							.3								
AVERAGE		.061	MAXIMUM .125		356.1	35.6	90		603.5	103.0	82		9.2	1.3	85	
NO. OF SAMPLES					15	2			15	2			15	2		

Waste Stabilization Pond

PROJECT : SARNIA (BRIGHT'S GROVE)

Cell Acreage :

Total Acreage :

Commenced Operation: Fall 1977

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ● Batch
- ☐ Continuous
- ☐ None

Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001989 — BRIGHT'S GROVE POLICE VILLAGE LAGOON

MUNICIPALITY : SARNIA BRIGHTS GROVE
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 17,513

* COMMENT: NO DISCHARGE IN 1978
LAGOON CONSTRUCTION COMPLETED IN FALL 1977

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.500 MIGD — DESIGN BOD5 : MG/L — DESIGN SUSP.SOLIDS : MG/L

	<--- * FLOW DATA --->			<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	* EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.239	.104														
FEB	4.415	.158														
MAR	2.354	.076														
APR	3.560	.119														
MAY	2.950	.095														
JUN	2.690	.090														
JUL	2.874	.093	.280													
AUG	2.853	.092	.270													
SEP	3.136	.105	.390													
OCT	2.654	.086	.290													
NOV	2.854	.095														
DEC	2.444	.079														
TOTAL	36.023															
AVERAGE		.099	MAXIMUM .390													
NO. OF SAMPLES																

Waste Stabilization Pond

PROJECT : SEAFORTH

Cell Acreage : 10.0 + 10.0 + 10.0

Total Acreage : 30.0

Commenced Operation : Nov. 1963

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : 1 & 2 parallel series to #3

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ■ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

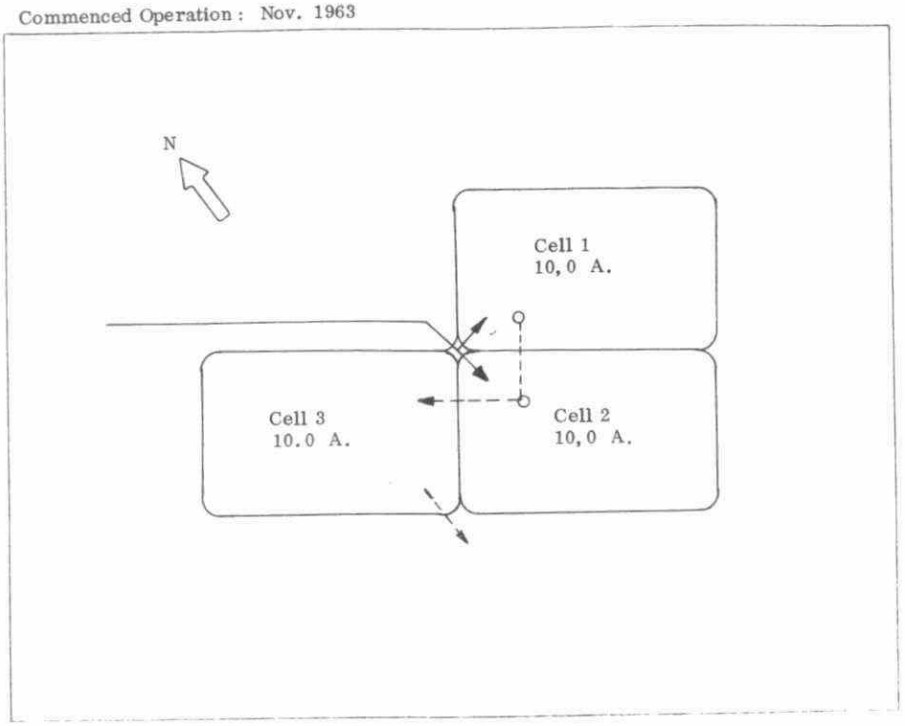
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 828 US gpm
Pump 2 : 828 US gpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001177 SEAFORTH LAGOON

MUNICIPALITY : SEAFORTH
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,029

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.270 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	10.372	.334	.471		*				*				*			
FEB	8.208	.293	.402		*				*				*			
MAR	14.287	.460	.970		*				*				*			
APR	18.747	.624	1.277		44.0	16.0	63	5.2	53.0	21.0	60	5.9	2.7	3.4	-	-
MAY	11.488	.370	.627		30.0	13.0	56	1.9	25.0	28.0	-	-	3.5	.4	88	.3
JUN	8.472	.282	.480		94.0				183.0				7.3			
JUL	7.387	.238	.426		32.0				33.0				3.9			
AUG	7.110	.229	.307		40.0				21.0				3.3			
SEP	9.611	.320	.689		*				*				*			
OCT	11.689	.377	.754		*				*				*			
NOV	9.274	.310	.408		*				*				*			
DEC	11.408	.368	.574		*				*				*			
TOTAL	128.053							7.1				5.9				.3
AVERAGE		.350	MAXIMUM 1.277		48.0	14.5	69		63.0	24.5	61		4.1	1.9	54	
NO. OF SAMPLES					5	9			5	8			5	9		

Waste Stabilization Pond

PROJECT : SOMBRA TWP
(PORT LAMBTON)

Cell Acreage : 12 + 12

Total Acreage : 24

Commenced Operation : Nov. 1975

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

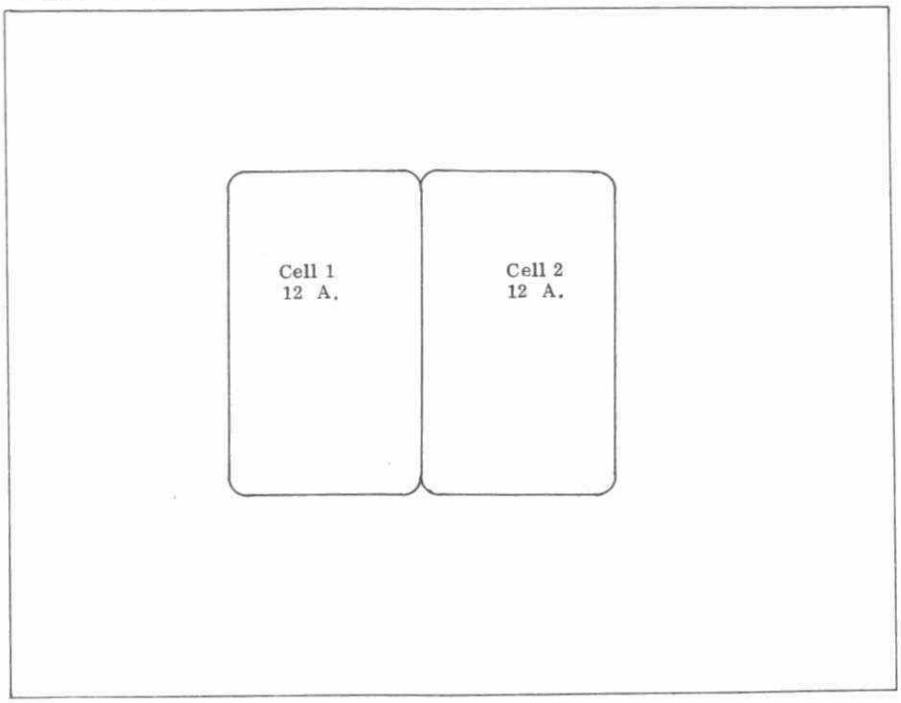
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 500 I gpm
Pump 2 : 500 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001694 PORT LAMBTON LAGOON

MUNICIPALITY : SOMBRA (PORT LAMBTON)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 4,258

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.235 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.703	.087														
FEB	2.226	.079														
MAR	3.408	.110														
APR	2.573	.086			66.0	5.0	92	1.5	82.0	33.0	59	1.2	5.3	.8	84	.1
MAY	2.667	.086			205.0	6.0	97	5.3	142.0	20.0	85	3.2	9.1	.3	96	.2
JUN	2.142	.071			68.0	6.0	91	1.3	60.0	20.0	66	.8	5.0	1.8	62	
JUL	2.086	.067			60.0	2.0	96	1.2	56.0	10.2	81	.9	6.0	.2	96	.1
AUG	2.106	.068														
SEP	2.114	.070			185.0				192.0				11.3			
OCT	2.290	.074			70.0				48.0				6.4			
NOV	2.192	.073			112.0	4.5	95	2.3	68.0	26.5	61	.9	8.4	.4	94	.1
DEC	2.181	.070			82.0				82.0				5.9			
TOTAL	28.688							11.6				7.0				.5
AVERAGE		.078	MAXIMUM		106.0	4.7	95		91.2	21.9	75		7.1	.7	89	
NO. OF SAMPLES					8	9			8	9			8	9		

Waste Stabilization Pond

PROJECT : SOMBRA TWP
(SOMBRA)

360

Cell Acreage : 12 + 12

Total Acreage : 24

Commenced Operation : Nov. 1975

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

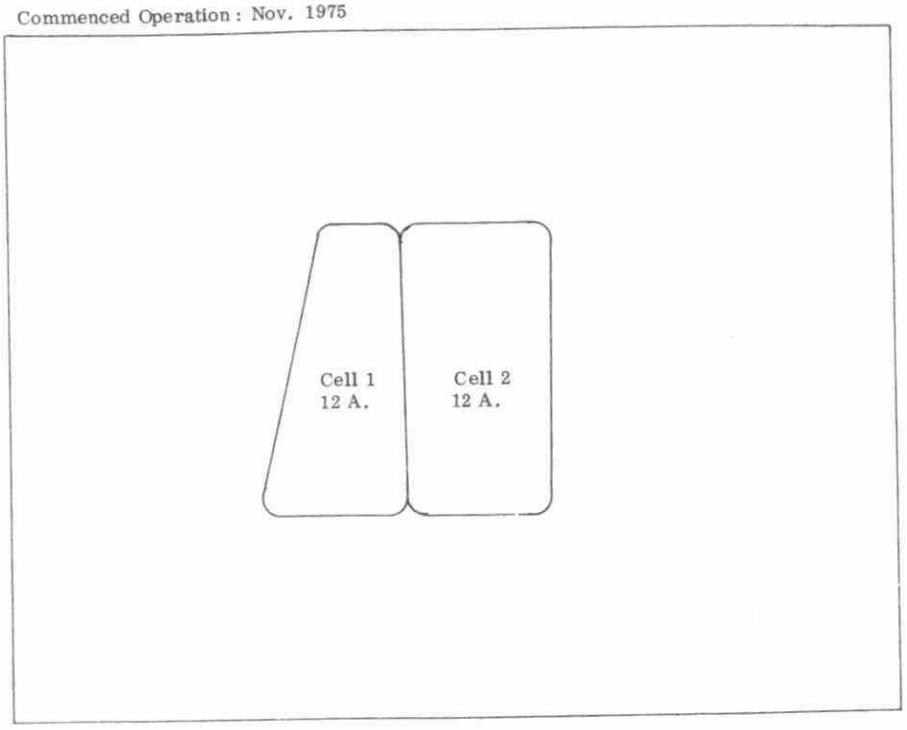
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 500 I gpm
Pump 2 : 500 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001685 PORT SOMBRA LAGOON

MUNICIPALITY : SOMBRA (PORT SOMBRA)
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 4,258

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.197 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.950	.030														
FEB	1.691	.060														
MAR	1.314	.042														
APR	.947	.031			90.0	6.0	93	.7	97.0	37.0	61	.5	7.9	.3	96	
MAY	1.035	.033			88.0	4.0	95	.8	68.0	21.0	69	.4	9.0	1.7	81	
JUN	.903	.030			122.0	5.2	95	1.0	113.0	16.0	85	.8	7.2		99	
JUL	.991	.031			104.0				84.0				7.4			
AUG	.891	.029			130.0				94.0				11.7			
SEP	.943	.031			72.0				46.0				6.9			
OCT	.916	.030			215.0				120.0				11.5			
NOV	.892	.030			88.0	5.3	93	.7	67.0	30.0	55	.3	7.7	.5	93	
DEC	1.100	.035			68.0	1.8	97	.7	68.0	1.0	98	.7	5.4	.6	87	
TOTAL	12.573							3.9				2.7				
AVERAGE		.034	MAXIMUM		108.5	4.4	95		84.1	21.0	75		8.3	.6	92	
NO. OF SAMPLES					9	5			9	5			8	5		

Waste Stabilization Pond

PROJECT : TILBURY W. (P.V. COMBER)

Cell Acreage : 6.0 + 6.0

Total Acreage : 12.0

Commenced Operation: JUL 1976

Operation :

- ■ Series — single cell discharge
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

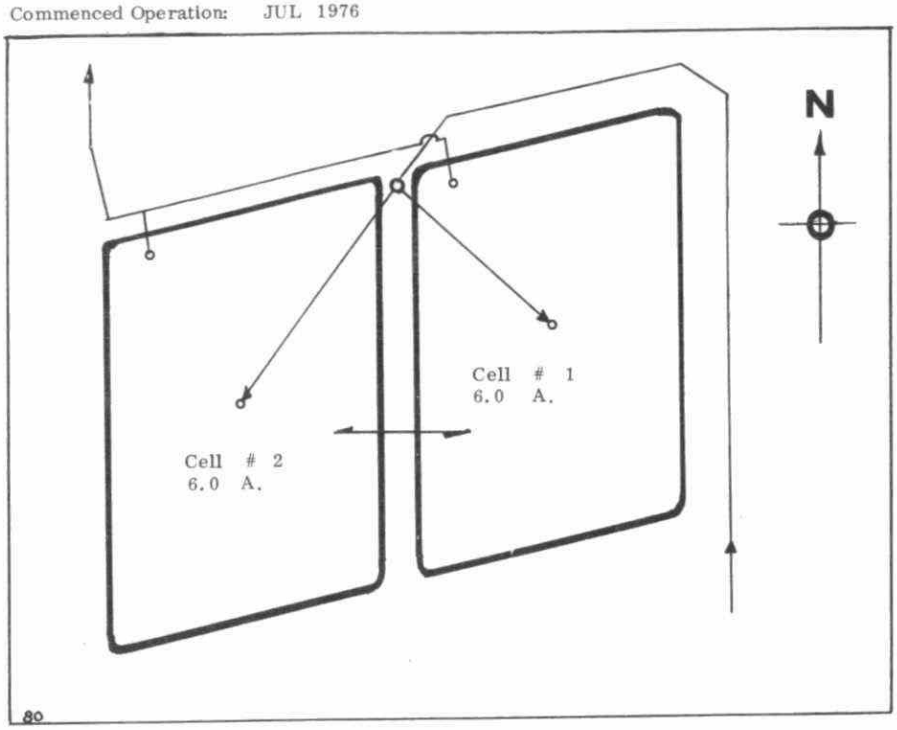
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 170 Igpm
Pump 2 : 170 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001676 COMBER LAGOON

MUNICIPALITY : TILBURY WEST PV COMBER
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION :

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.080 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	% REDUCTION	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	% REDUCTION	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	% REDUCTION	10(3) LBS
JAN/78-DEC/78																
JAN	1.631	.053	.100													
FEB	1.337	.048	.056													
MAR	2.514	.081	.241													
APR	1.589	.053	.123			10.4				32.0				.2		
MAY	1.197	.039	.045													
JUN	1.189	.040	.050													
JUL	1.212	.039	.044													
AUG	1.066	.034	.044		180.0				193.0				9.6			
SEP	1.220	.041	.061		110.0				75.0				6.8			
OCT	1.252	.040	.054		92.0				72.0				7.0			
NOV	1.309	.044	.006		62.0	1.2	98	.7	47.0	22.5	52	.3	4.7	.1	97	
DEC	1.454	.047	.077													
TOTAL	16.970							.7				.3				
AVERAGE		.047	MAXIMUM .241		111.0	5.8	94		96.7	27.2	71		7.0	.1	97	
NO. OF SAMPLES					4	2			4	2			4	2		

Waste Stabilization Pond

PROJECT : WATFORD

Cell Acreage : 15 + 15

Total Acreage : 30

Commenced Operation : N/A

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

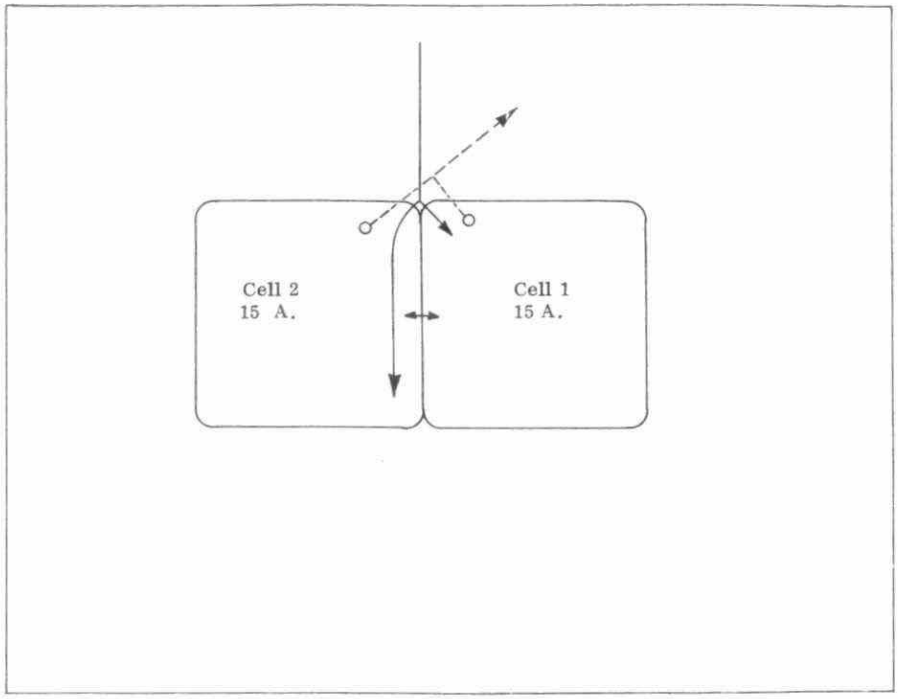
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 525 I gpm
Pump 2 : 525 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001809 WATFORD LAGOON

MUNICIPALITY : WATFORD
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,413

* NO DATA AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.210 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	4.279	.138	2.033													
FEB	2.933	.104	1.444													
MAR	3.436	.110	2.196		*	*			*	*			*	*		
APR	3.124	.104	1.597		*	10.0			*	*			*	2.0		
MAY	2.718	.087	1.032		*	*			*	*			*	*		
JUN	2.718	.087	1.032		*	*			*	*			*	*		
JUL	2.478	.080	1.191		285.0	3.6	98	6.9	1000.0	10.5	98	24.5	*	*		
AUG	2.515	.081	.922		*	*			*	*			*	*		
SEP	2.721	.091	1.428		*	*			*	*			*	*		
OCT	2.954	.095	1.406		*	*			*	*			*	*		
NOV	3.218	.107	1.488													
DEC	3.536	.114	1.801													
TOTAL	36.630							6.9				24.5				
AVERAGE		.100	MAXIMUM 2.196		285.0	6.8	97		1000.0	10.5	98			2.0		
NO. OF SAMPLES					1	2			1	1				1		

Waste Stabilization Pond

PROJECT : WEST LORNE

Cell Acreage : 10 + 10

Total Acreage : 20

Commenced Operation : Nov. 1972

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

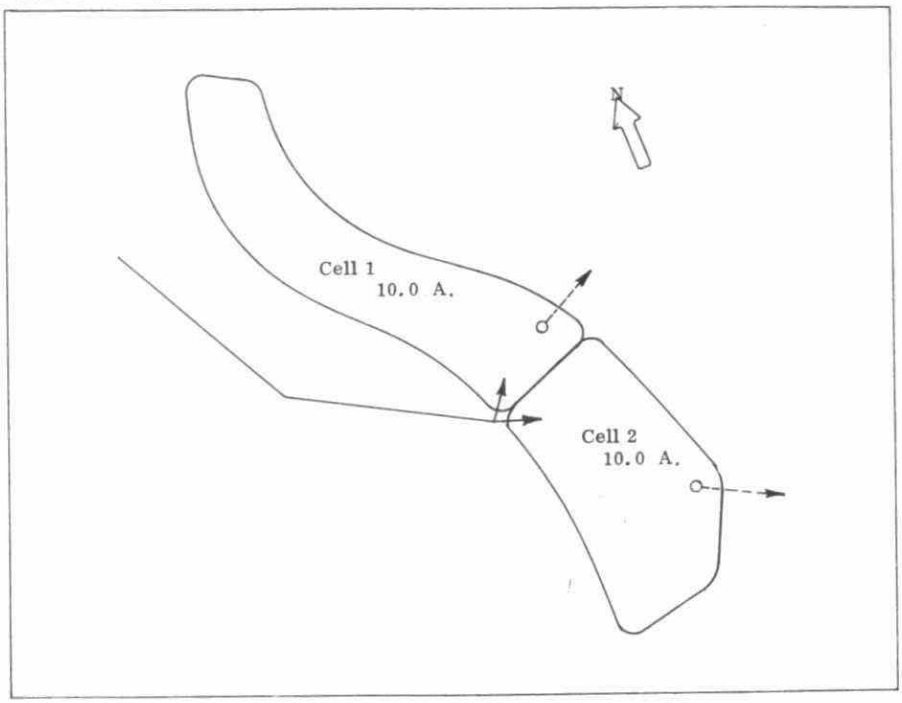
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 467 I gpm
Pump 2 : 467 I gpm

Total Cap : 467 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001337 — WEST LORNE LAGOON

MUNICIPALITY : WEST LORNE
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,256

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.147 MIGD DESIGN BOD5 : MG/L DESIGN SUSP. SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	*TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.643	.117	.218		56.0				44.0				3.8			
FEB	2.980	.106	.152		54.0				40.0				2.5			
MAR	4.861	.157	.269		168.0				48.0				6.0			
APR	4.609	.153	.292		58.0				43.0				3.8			
MAY	3.886	.125	.186		100.0	6.4	93	3.6	42.0	24.0	42	.6	4.8	0.09	98	.1
JUN	2.916	.097	.118		134.0				97.0				6.8			
JUL	2.808	.091	.149		44.0				27.0				3.6			
AUG	2.803	.090	.160		74.0				45.0				4.2			
SEP	2.645	.088	.122		95.0				66.0				5.3			
OCT	2.896	.093	.141		180.0				53.0				6.0			
NOV	2.871	.096	.158		*	6.0			*	7.7			*	.5		
DEC	3.239	.104	.162		40.0				43.0				3.1			
TOTAL	40.157							3.6				.6				.1
AVERAGE		.110	MAXIMUM .292		91.1	6.2	93		49.8	15.8	68		4.5	.3	93	
NO. OF SAMPLES					14	4			14	4			14	4		

Waste Stabilization Pond

PROJECT : WIARTON

Cell Acreage : 5.0 + 5.0 + 5.0

Total Acreage : 15.0

Commenced Operation : May 1960

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : #1 & #3 parallel #2 in series

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

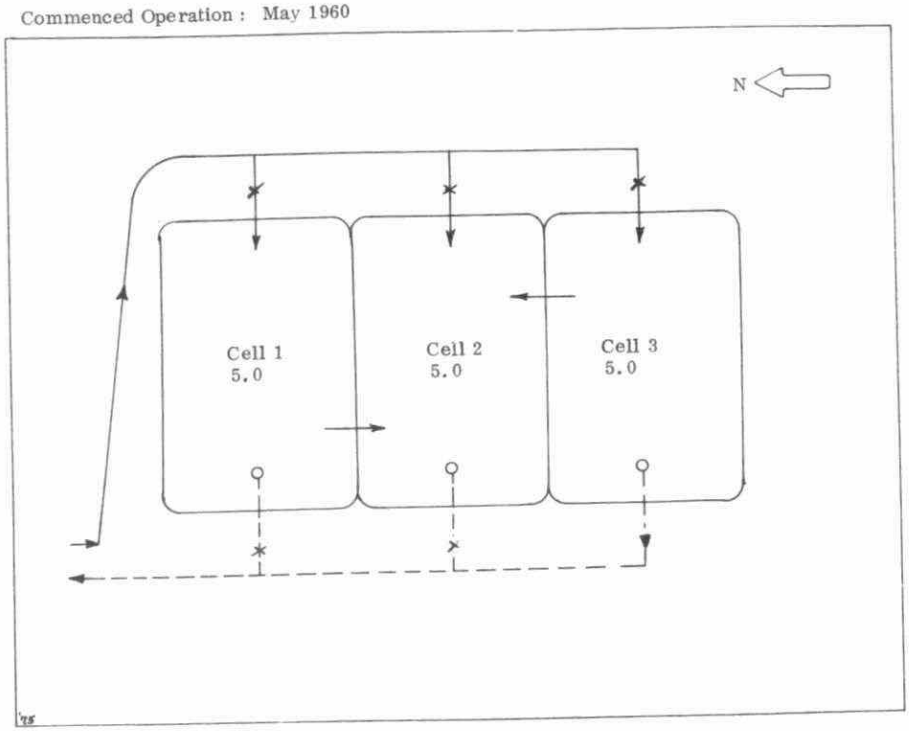
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 327 I gpm
Pump 2 : 327 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000819 WIARTON LAGOON

MUNICIPALITY : WIARTON
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 2,060

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.150 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	16.581	.349			500.0	6.4	98	81.8	728.0	12.0	98	118.7	23.5	1.8	92	3.5
FEB	12.306	.287			*	*			*	*			*	*		
MAR	17.694	.372			80.0	20.0	75	10.6	80.0	13.0	83	11.8	4.4	2.8	36	.2
APR	17.694	.392			24.0	17.0	29	1.2	23.0	7.5	67	2.7	2.1	1.6	23	
MAY	19.317	.407			60.0	25.0	58	6.7	51.0	55.0	-	-	3.3	2.1	36	.2
JUN	14.109	.307			335.0	13.0	96	45.4	188.0	27.0	85	22.7	4.7	1.0	78	.5
JUL	14.109	.307			600.0	23.0	96	81.4	3410.0	95.0	97	467.7	25.0	2.1	91	3.2
AUG	11.730	.247			280.0	14.0	95	31.2	442.0	36.0	91	47.6	8.0	1.6	80	.7
SEP	13.848	.301			70.0	14.0	80	7.7	125.0	120.0	4	.6	2.9	1.9	34	.1
OCT	14.400	.303			64.0	15.0	76	7.0	33.0	62.0	-	-	2.6	1.7	34	.1
NOV	16.695	.363			85.0	16.0	81	11.5	135.0	60.0	55	12.5	4.1	2.1	48	.3
DEC	19.950	.357			40.0	9.6	76	6.0	62.0	22.0	64	7.9	2.1	2.3	-	-
TOTAL	188.433							290.5				692.2				8.8
AVERAGE			MAXIMUM		194.3	15.7	91		479.7	46.3	90		7.5	1.9	74	
		.333														
NO. OF SAMPLES					11	11			10	11			11	11		

Waste Stabilization Pond

PROJECT : WINGHAM

Cell Acreage : 15 + 15

Total Acreage : 30.0

Commenced Operation : Nov. 1964

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

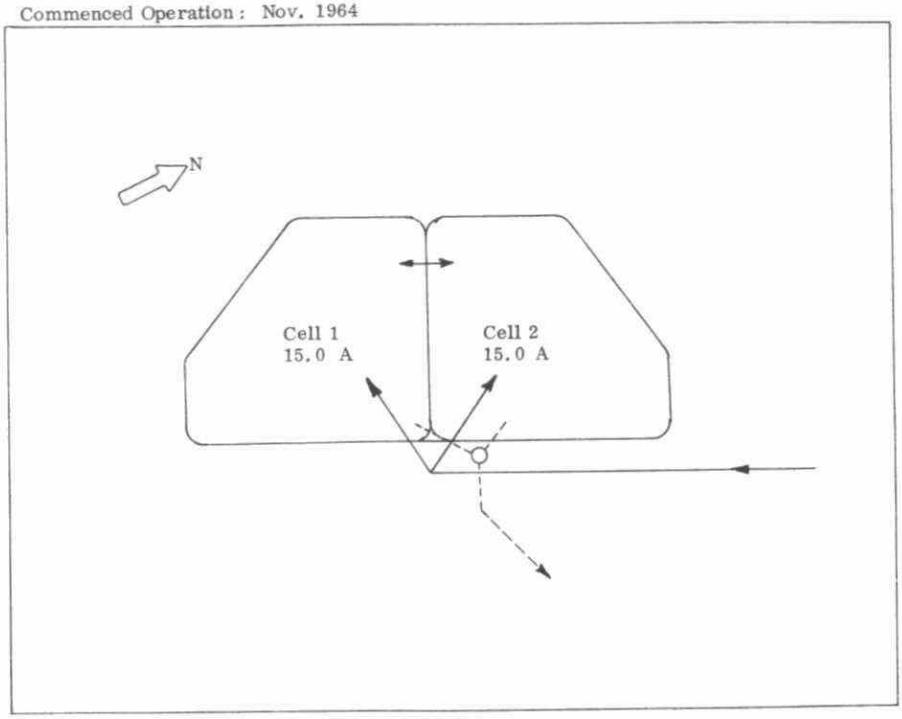
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 900 US gpm
Pump 2 : 900 US gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000828 WINGHAM LAGOON

MUNICIPALITY : WINGHAM
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS * COMMENT: HYDRAULIC OVERLOAD

CURRENT POPULATION : 2,891

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	18.671	.602	.969		129.0	25.0	80	19.4	178.0	10.0	94	31.3	7.2	2.9	59	.8
FEB	12.577	.449	.630		114.0	22.0	80	11.5	100.0	11.0	89	11.1	7.0	3.4	51	.4
MAR	18.800	.600														
APR	29.595	.986	2.457		30.0	15.0	50	4.4	39.0	18.0	53	6.2	1.5	2.2	-	-
MAY	17.209	.555	2.109		128.0	10.0	92	20.3	158.0	11.0	93	25.2	4.6	1.6	65	.5
JUN	14.367	.479	1.197													
JUL	11.886	.383	.714		115.0	7.0	93	12.8	133.0	4.0	96	15.3	7.2	1.5	79	.6
AUG	11.450	.369	.630		92.0	14.0	84	8.9	78.0	18.0	76	6.8	5.3	2.4	54	.3
SEP	14.573	.486	1.043		140.0	6.0	95	19.5	130.0	7.0	94	17.9	6.9	2.9	57	.5
OCT	16.845	.543			86.0	3.0	96	13.9	66.0	7.0	89	9.9	5.8	2.5	56	.5
NOV	13.251	.442			195.0	5.0	97	25.1	406.0	7.0	98	52.8	10.3	2.9	71	.9
DEC	15.762	.509	.918		48.0				54.0				2.5			
TOTAL	194.986							135.8				176.5				4.5
AVERAGE		.534	MAXIMUM 2.457		107.7	11.8	88		134.2	10.3	92		5.8	2.4	57	
NO. OF SAMPLES					12	12			12	11			12	12		

Waste Stabilization Pond

PROJECT : ZURICH

Cell Acreage : 6.5 + 6.5

Total Acreage : 13.0

Commenced Operation : Jan. 1974

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

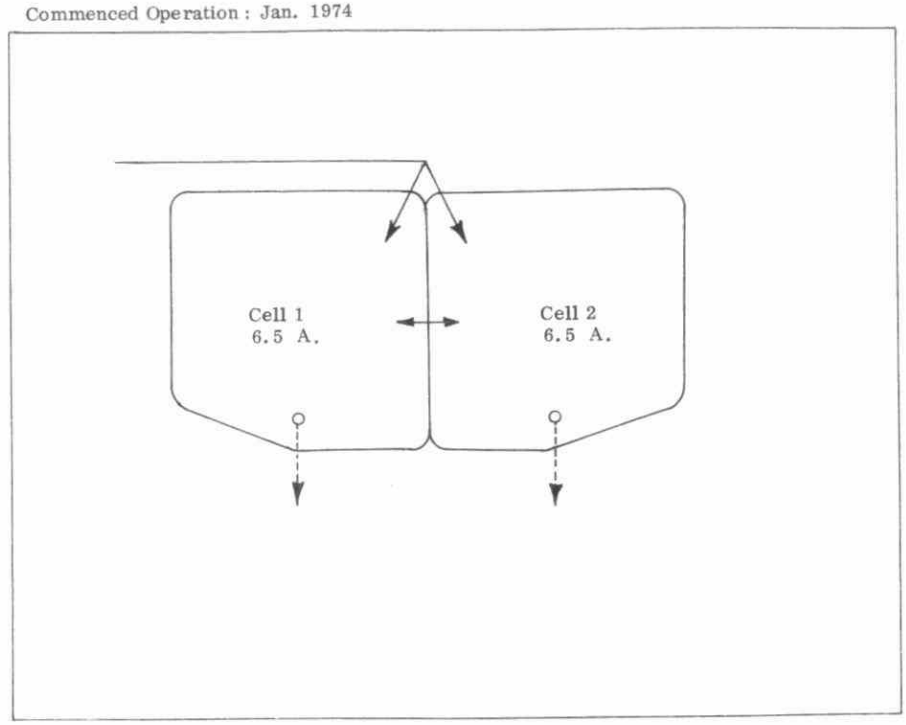
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 300 US gpm
Pump 2 : 300 US gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001444 ZURICH LAGOON

MUNICIPALITY : ZURICH
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

* NO DATA AVAILABLE

CURRENT POPULATION : 779

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.100 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.061	.066	.081		*				*				*			
FEB	1.747	.062	.071		*				*				*			
MAR	3.458	.112	.429		*				*				*			
APR	2.985	.099	.200		*	18.0			*	*			*	3.6		
MAY	2.147	.069	.083		*	*			*	*			*	*		
JUN	1.931	.064	.084		*	*			*	*			*	*		
JUL	1.984	.064	.141		*				*				*			
AUG	1.859	.060	.096		*				*				*			
SEP	1.892	.063	.100		*	*			*				*	*		
OCT	2.546	.082	.099		*	*			*				*	*		
NOV	2.298	.077	.113		*				*				*			
DEC	2.557	.082	.098		80.0				352.0				3.5			
TOTAL	27.465															
AVERAGE		.075	MAXIMUM .429		80.0	18.0	77		352.0				3.5	3.6		
NO. OF SAMPLES					1	1			1				1	1		

Ministry of the Environment
Ontario

West Central Region

(2)

REGIONAL OFFICE
STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES
Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

SUB-OFFICE
Simcoe
645 Norfolk St. N.
519-426-1940

Waste Stabilization Pond

PROJECT : ARTHUR

Cell Acreage : 4.85 + 4.85 + 7.19 + 11.8

Total Acreage : 28.7

Commenced Operation : (Cell 1 + Cell 2) : 1962
Expansion : (Cell 3) 1972
Expansion : (Cell 4) Nov 1975

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

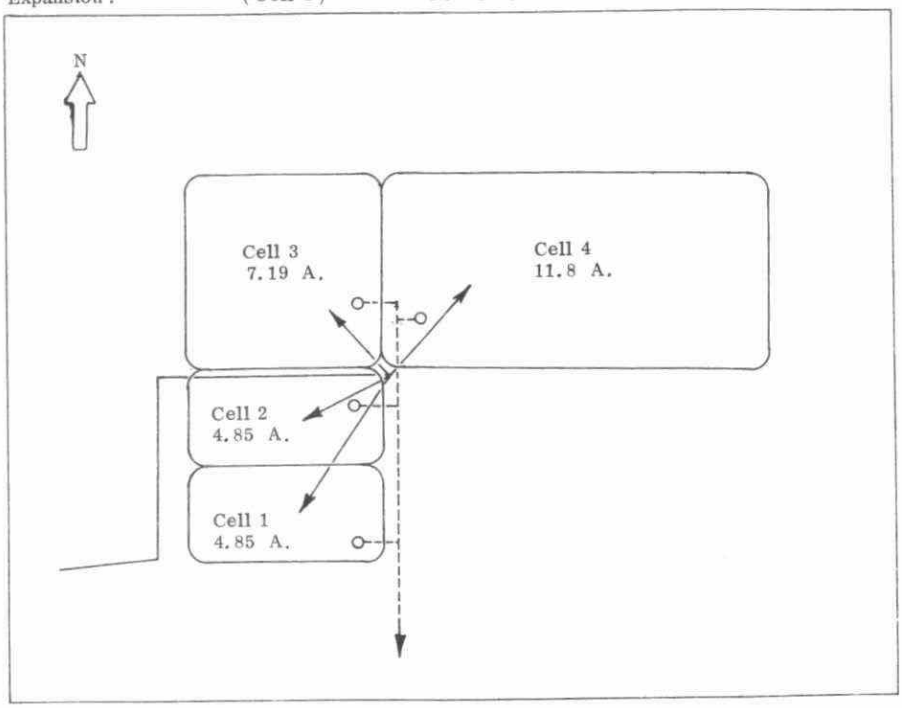
Flow Measurement :

- ☐ Flow Meter
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 600 I gpm
Pump 2 : 600 I gpm

Total Cap : 900 I gpm (Est.)



Signifigant Industries : Bell Threads

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000882 ARTHUR LAGOON

MUNICIPALITY : ARTHUR
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,669

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.216 MIGD DESIGN BOD5 : MG/L DESIGN SUSP. SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.739	.153	.291		100.0				90.0				5.2			
FEB	4.180	.149	.202		130.0				65.0				8.3			
MAR	6.354	.205	.391		150.0				165.0				2.5			
APR	10.822	.361	.328		60.0	23.0			68.0	33.0			3.3	2.5		
MAY	7.004	.226	.258		220.0	47.0			45.0	106.0	-	-	2.8	1.8		
JUN	5.694	.190	.252		70.0				75.0				4.5			
JUL	3.954	.128	.175		40.0				90.0				4.0			
AUG	3.964	.128	.163		150.0				420.0				9.2			
SEP	5.179	.173	.362		110.0				510.0				5.0			
OCT	5.122	.165	.256		260.0	17.0			130.0	44.0			2.8	1.1	60	
NOV	5.075	.169	.293		110.0				50.0				1.1			
DEC	5.092	.164	.268		110.0				75.0				8.8			
TOTAL	67.179															
AVERAGE		.184	MAXIMUM .391		125.8	29.0	76		148.5	61.0	58		4.7	1.8	62	
NO. OF SAMPLES					12	17			12	17			12	17		

Waste Stabilization Pond

PROJECT : HARRISTON

Cell Acreage : 10 + 10 + 8

Total Acreage : 28

Significant Industries: Canada Packers

Commenced Operation : 1965

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

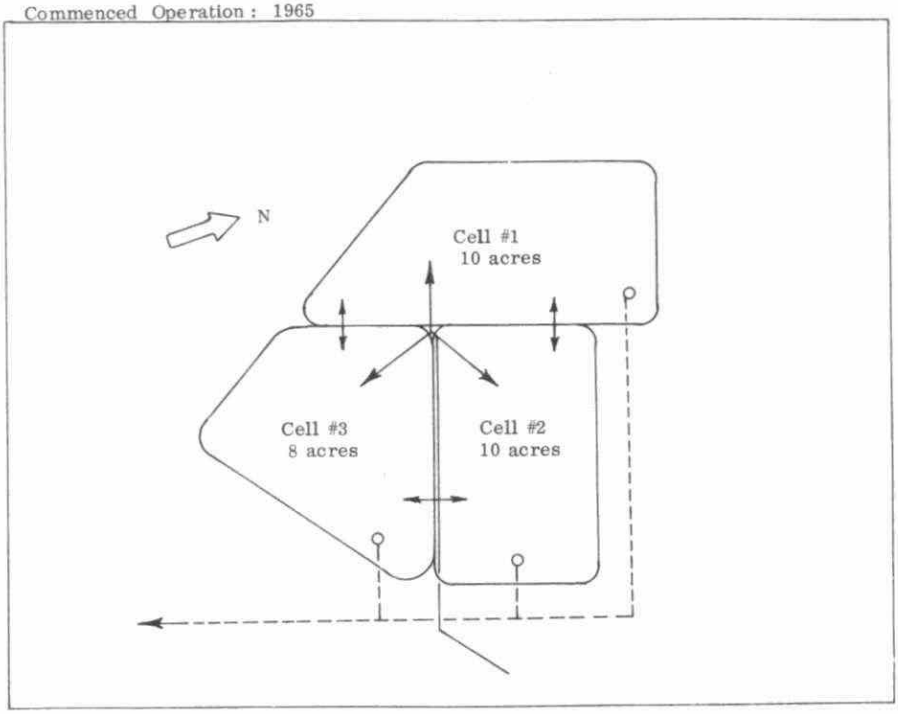
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 480 US gpm
Pump 2 : 480 US gpm

Total Cap : 960 US gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000329 HARRISTON LAGOON

MUNICIPALITY : HARRISTON
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 1,954

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.219 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.528	.243			305.0				373.0				12.6			
FEB	7.838	.280			168.0				270.0				14.0			
MAR	14.813	.478			*				*				*			
APR	19.450	.648			*	16.2			*	16.3			*	2.9		
MAY	10.464	.338			*	13.3			*	40.0			*	2.6		
JUN	7.786	.260			*				*	*			*			
JUL	7.137	.230			118.0				215.0				14.0			
AUG	5.266	.170			220.0				515.0				20.0			
SEP	5.829	.194			75.0				177.0				11.0			
OCT	6.797	.219			117.0				183.0				9.9			
NOV	6.043	.201			162.0	16.0	90	8.8	368.0	27.0	92	20.6	20.6	4.3	79	.9
DEC	7.981	.258			*				*				*			
TOTAL	106.932							8.8				20.6				.9
AVERAGE		.293	MAXIMUM		166.4	15.1	90		300.1	27.7	90		14.5	3.2	77	
NO. OF SAMPLES					16	12			16	12			16	12		

Waste Stabilization Pond

PROJECT : NANTICOKE (JARVIS)

Cell Acreage : 5 + 7

Total Acreage : 12

Commenced Operation : 1967

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

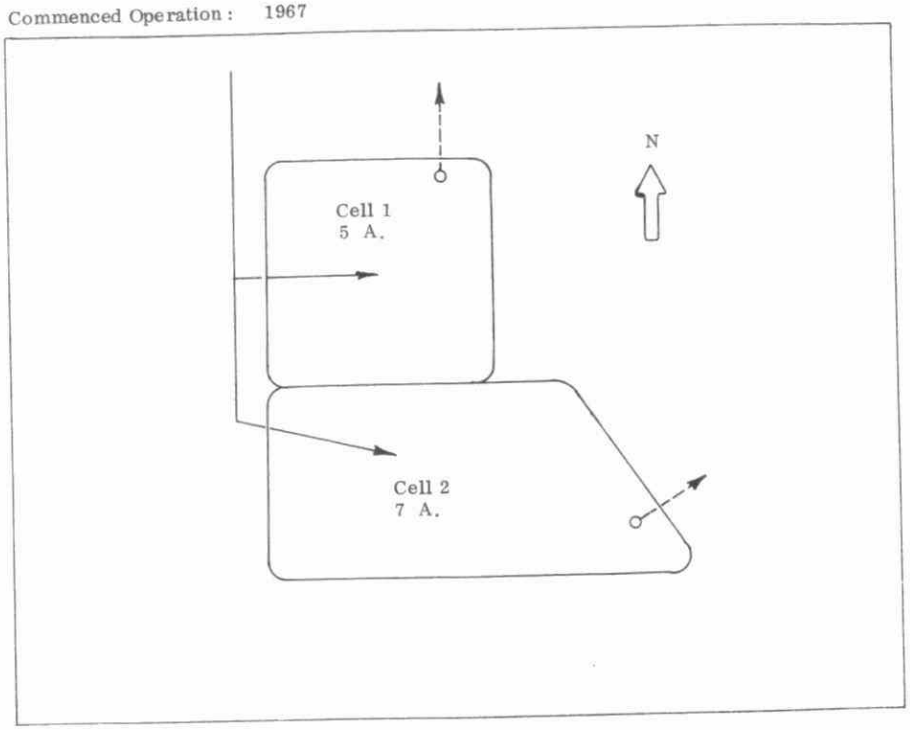
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 325 US gpm
Pump 2 : 325 US gpm

Total Cap : 650 US gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 120001434 NANTICOKE (JARVIS)

MUNICIPALITY : NANTICOKE JARVIS
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 18,829

* NO DATA AVAILABLE

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.120 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->								
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.257	.137														
FEB	5.643	.202			138.0				149.0				10.2			
MAR	5.958	.192			120.0				144.0				11.0			
APR	*	*			190.0	14.4	92	.	246.0	19.4	92		9.5	2.3	75	
MAY	4.106	.132			148.0				97.0				6.4			
JUN	5.330	.190			150.0				540.0				8.9			
JUL	3.180	.102			110.0				101.0				7.8			
AUG	3.573	.115	.144		102.0				247.0				6.3			
SEP	4.653	.155	.204		145.0				156.0				9.4			
OCT	4.914	.159	.256		120.0	28.9	75	4.4	92.0	15.7	82	3.7	8.6	1.5	82	.3
NOV	4.055	.135	.230		170.0				259.0				8.4			
DEC	5.314	.171	.279		38.0				74.0				2.5			
TOTAL	50.983							4.4				3.7				.3
AVERAGE		.154	MAXIMUM .279		130.0	21.6	83		191.3	17.5	90		8.0	1.9	76	
NO. OF SAMPLES					11	24			11	24			11	24		

Waste Stabilization Pond

PROJECT : NORFOLK TWP
(PORT ROWAN)

Cell Acreage : 10 + 10

Total Acreage : 20

Commenced Operation: Dec. 1972

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

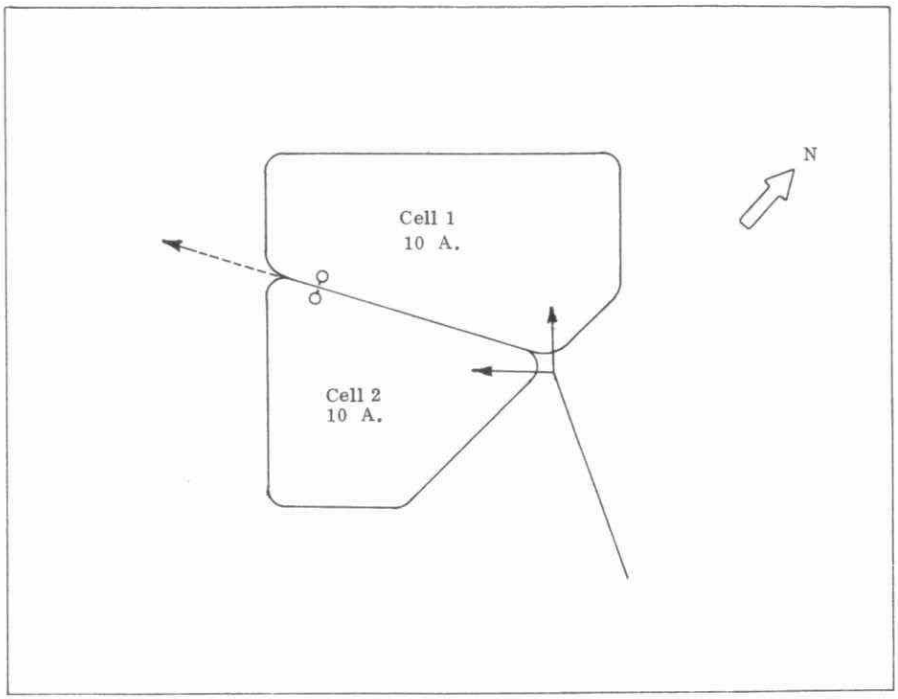
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 312 I gpm
Pump 2 : 312 I gpm

Total Cap : 600 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001113 PORT ROWAN LAGOON

MUNICIPALITY : NORFOLK PORT ROWAN
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 10,980

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.160 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.403	.045														
FEB	1.180	.042	.046													
MAR	2.068	.066	.211													
APR	1.635	.055	.071		135.0	11.0	91	2.0	198.0	31.0	84	2.7	11.0	.9	91	.1
MAY	1.474	.048	.083													
JUN	1.437	.048	.089													
JUL	1.516	.049	.064		130.0				100.0				7.4			
AUG	1.600	.052	.111													
SEP	1.484	.049	.060													
OCT	1.708	.551	1.165													
NOV	1.504	.050	.063													
DEC	1.773	.057	.083													
TOTAL	18.782							2.0				2.7				.1
AVERAGE		.093	MAXIMUM 1.165		132.5	11.0	91		149.0	31.0	79		9.2	.9	90	
NO. OF SAMPLES					2	6			2	6			2	6		

Waste Stabilization Pond

PROJECT : SHELBURNE

Cell Acreage : 6.58 + 6.58

Total Acreage : 13.16

Commenced Operation : 1963

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

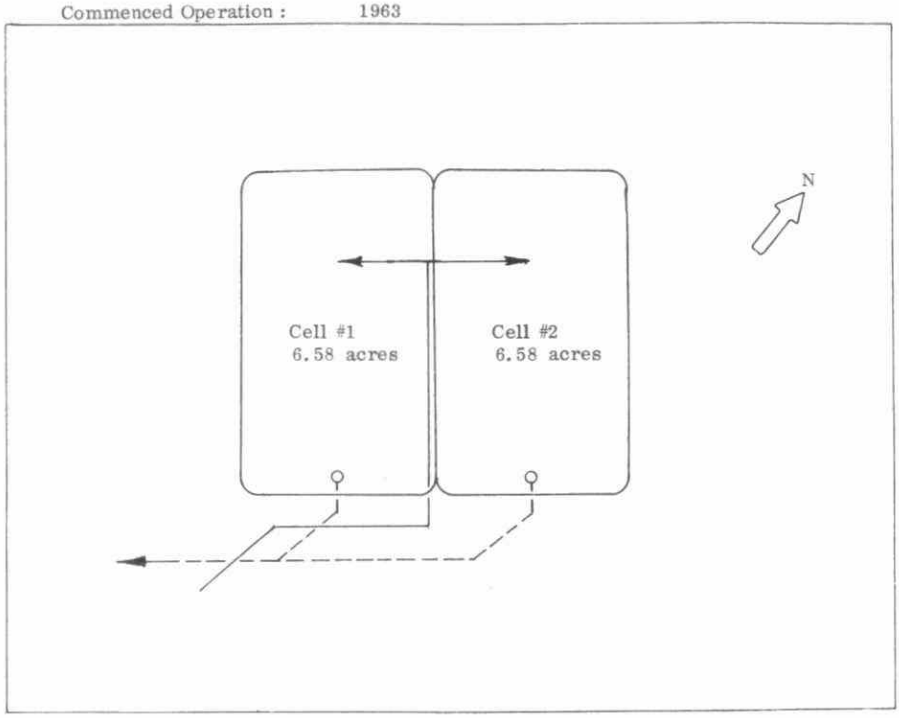
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : N/A
Pump 2 : N/A

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000659 SHELBURNE LAGOON

MUNICIPALITY : SHELBURNE
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 3,001

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.130 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	8.703	.281			160.0	45.0	71	10.0	280.0	22.0	92	22.4	5.8	4.4	24	.1
FEB	6.072	.217			115.0	60.0	47	3.3	145.0	30.0	79	6.9	6.2	4.8	22	
MAR	8.611	.278			110.0	65.0	40	3.8	143.0	22.0	84	10.4	6.2	4.4	29	.1
APR	17.658	.589			48.0	31.0	35	3.0	53.0	17.0	67	6.3	3.9	3.6	7	
MAY	13.913	.449			73.0	22.0	69	7.0	80.0	27.0	66	7.3	4.8	2.6	45	.3
JUN	11.548	.385			130.0	32.0	75	11.3	90.0	85.0	5	.5	8.1	2.1	74	.6
JUL	10.622	.343			90.0	25.0	72	6.9	65.0	40.0	38	2.6	5.9	4.8	18	.1
AUG	10.749	.347			50.0	12.0	76	4.0	70.0	35.0	50	3.7	10.0	1.6	84	.9
SEP	9.222	.307			91.0	21.0	76	6.4	78.0	50.0	35	2.5	4.7	4.2	10	
OCT	9.934	.320			90.0	26.0	71	6.3	70.0	50.0	28	1.9	5.6	3.9	30	.1
NOV	8.424	.281			140.0	32.0	77	9.0	145.0	60.0	58	7.1	5.4	4.3	20	
DEC	10.147	.327			120.0	30.0	75	9.1	160.0	60.0	62	10.1	7.6	5.0	34	.2
TOTAL	125.603							80.1				81.7				2.4
AVERAGE		.344	MAXIMUM		101.4	33.4	67		114.9	41.5	63		6.1	3.8	38	
NO. OF SAMPLES					17	18			17	17			24	27		

Waste Stabilization Pond

PROJECT : TWP WILMOT
(NEW HAMBURG)

Cell Acreage : 14 + 13.4

Total Acreage : 27.4

Commenced Operation (Cell 1): July 1962
Expansion (Cell 2) Sept 1969

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

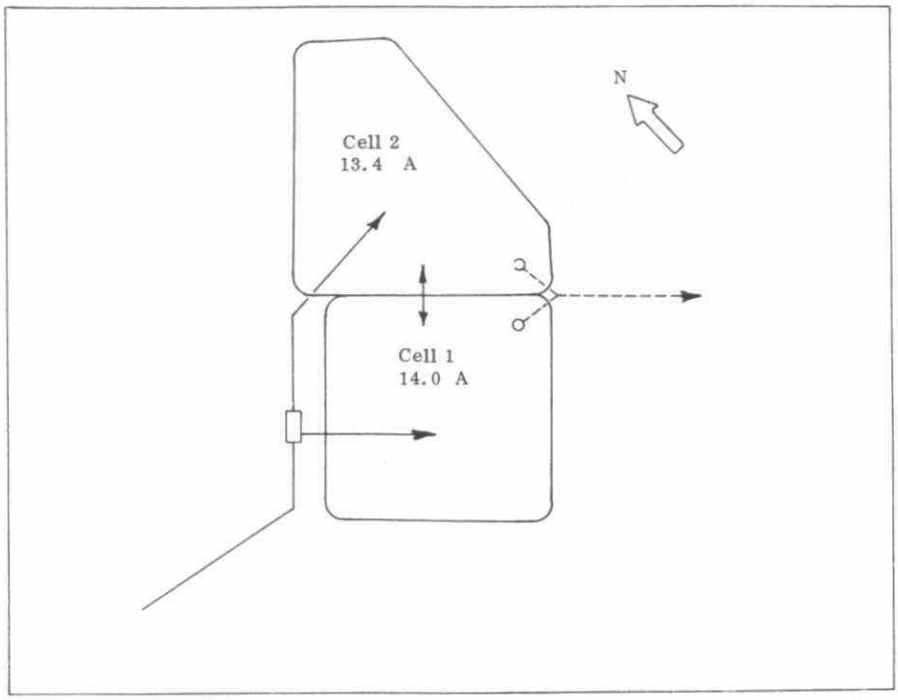
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 600 I gpm
Pump 2 : 600 I gpm

Total Cap : N/A



Signifigant Industries : Hahn Brass, Klassen Bronz, Oak Grove Creamery, Co-op Hatchery Ontario Drive and Gear, Felt Boot.

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000506 NEW HAMBURG LAGOON

MUNICIPALITY : WILMOT NEW HAMBURG
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 10,731

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.280 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.563	.244	.324		125.0				285.0				7.2			
FEB	6.350	.227	.256		174.0				310.0				9.6			
MAR	13.300	.429	.662		187.0				310.0				10.0			
APR	16.005	.534	1.037		153.5	14.5	90	22.2	200.8	14.2	92	29.8	9.5	2.1	77	1.1
MAY	9.387	.303	.497		190.0	34.3	81	14.6	371.5	19.8	94	33.0	10.5	2.4	76	.7
JUN	6.591	.220	.270		232.5				348.8				12.5			
JUL	6.472	.209	.288		170.0				270.0				12.4			
AUG	6.092	.197	.230		176.7				256.7				10.1			
SEP	7.728	.258	.650		162.0				336.0				9.4			
OCT	7.153	.231	.346		657.0	11.3	98	46.1	503.0	20.0	96	34.5	15.3	2.2	85	.9
NOV	6.971	.232	.399		176.0	17.5	90	11.0	268.0	37.5	86	16.0	8.9	2.1	76	.4
DEC	8.373	.270	.940		117.0				167.0				6.2			
TOTAL	101.985							93.9				113.3				3.1
AVERAGE		.280	MAXIMUM 1.037		210.0	19.4	90		302.2	22.8	92		10.1	2.2	78	
NO. OF SAMPLES					53	17			53	12			53	17		

Ministry of the Environment
Ontario

Central Region
③

REGIONAL OFFICE
DON MILLS
150 Ferrand Dr.
416-424-3000

DISTRICT OFFICES
Barrie
12 Fairview Rd.
705-726-1730

Muskoka-Haliburton
Gravenhurst Shopping Centre
705-687-3408

Peterborough
139 George St. N.
705-743-2972

Halton-Peel
1226 White Oaks Blvd.
Oakville
416-844-5747

SUB-OFFICE
Huntsville
100 Main St. E.
705-789-2386

Waste Stabilization Pond

PROJECT : BEETON

Cell Acreage : 6.0 + 8.8

Total Acreage : 14.8 Acres

Commenced operation November 1968

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

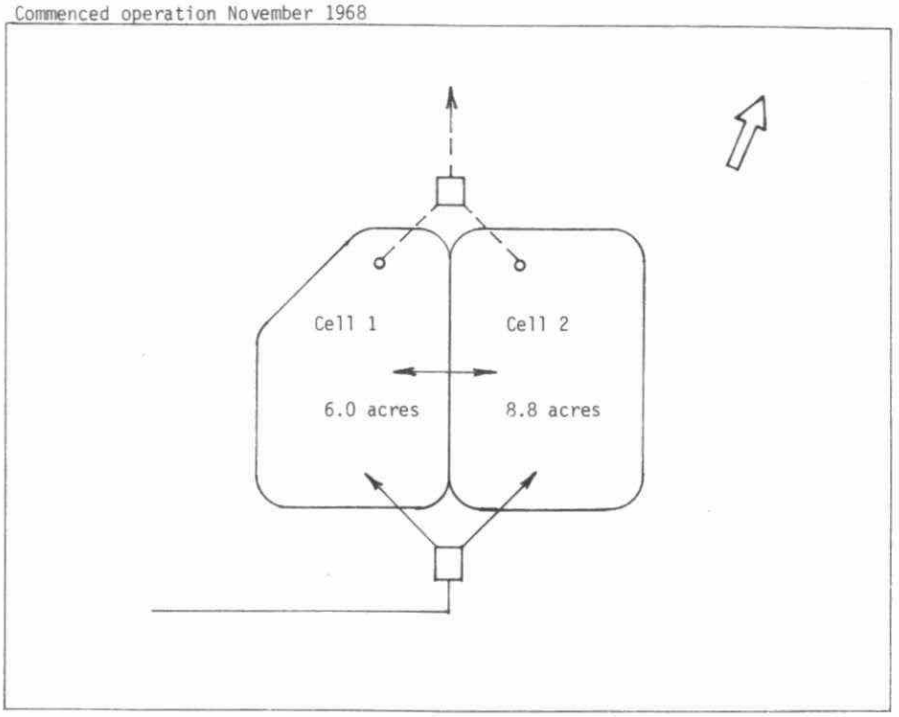
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 300 I gpm
Pump 2 : 300 I gpm

Total Cap : 420 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000917 BEETON LAGOON

MUNICIPALITY : BEETON
REGION : 03 CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL SERIES OPERATION

CURRENT POPULATION : 1,658

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : 93.0 MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	4.685	.151	.324		120.0				140.0				5.1			
FEB	3.220	.115	.285		100.0				102.0				5.7			
MAR	5.700	.184	.307		80.0				150.0				4.6			
APR	7.413	.247			70.0				77.0				3.4			
MAY	4.900	.158	.221		100.0				139.0				5.0			
JUN	3.710	.124	.133		110.0				285.0				6.9			
JUL	3.395	.110	.121		110.0				285.0				6.9			
AUG	3.598	.116	.139		80.0				140.0				4.4			
SEP	4.136	.138	.178		110.0				165.0				5.9			
OCT	4.234	.137	.182		120.0				150.0				6.2			
NOV	3.692	.123	.223		121.0				132.0				6.9			
DEC	3.866	.125	.150		110.0				175.0				8.0			
TOTAL	52.549															
AVERAGE		.144	MAXIMUM .324		102.8				162.0				5.8			
NO. OF SAMPLES					12				12				12			

Waste Stabilization Pond

PROJECT : HAVELOCK

Cell Acreage : 8.2 + 10.8

Total Acreage : 19.0

Commenced Operation: OCT 1975

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

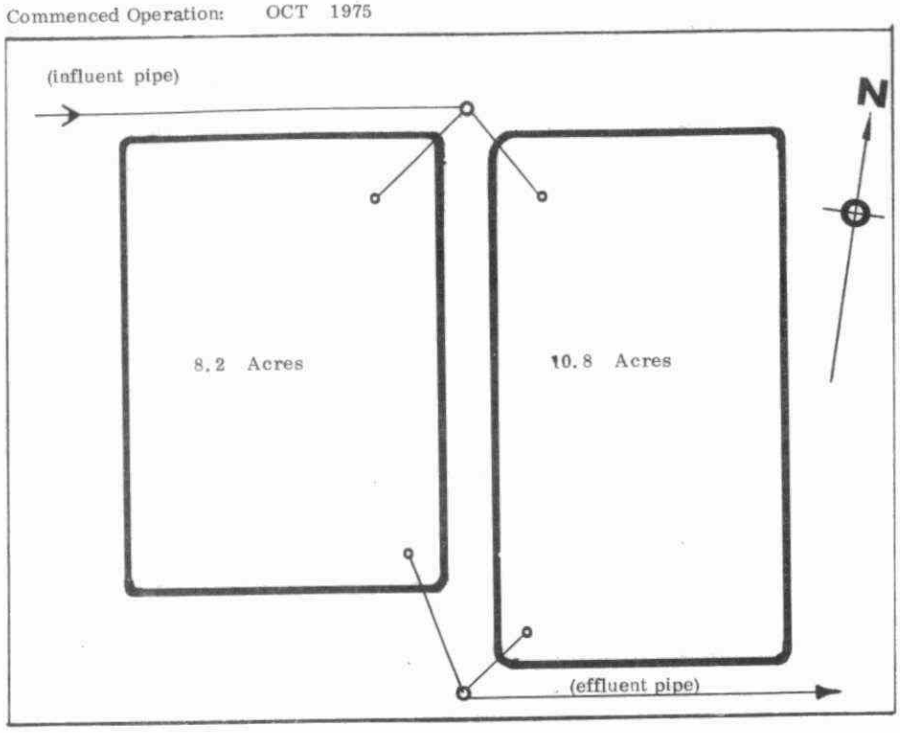
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001765 HAVELOCK LAGOON

MUNICIPALITY : HAVELOCK
REGION : 03 CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,236

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.130 MIGD DESIGN BOD5 : 200.0 MG/L DESIGN SUSP.SOLIDS : 250.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.640	.150	.175		*				*				*			
FEB	3.864	.138	.170		90.0				80.0				5.4			
MAR	4.657	.150	.189		113.0				282.0				5.1			
APR	6.140	.205	.248		*	10.0			*	8.8			*	1.3		
MAY	5.525	.178			*				*				*			
JUN	4.192	.140	.164		*				*				*			
JUL	3.326	.107	.138		*				*				*			
AUG	3.195	.103	.166		*				*				*			
SEP	3.104	.100	.133		*				*				*			
OCT	3.277	.106	.118		*				*				*			
NOV	3.200	.107	.128		*	4.0			*				*	1.8		
DEC	3.443	.111	.135		*				*				*			
TOTAL	48.563															
AVERAGE		.133	MAXIMUM .248		101.5	7.0	93		181.0	8.8	95		5.2	1.5	70	
NO. OF SAMPLES					4	6			4	5			4	6		

Waste Stabilization Pond

PROJECT : LAKEFIELD

Cell Acreage : 20.0 + 18.0

Total Acreage : 38.0

Commenced Operation 1971

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

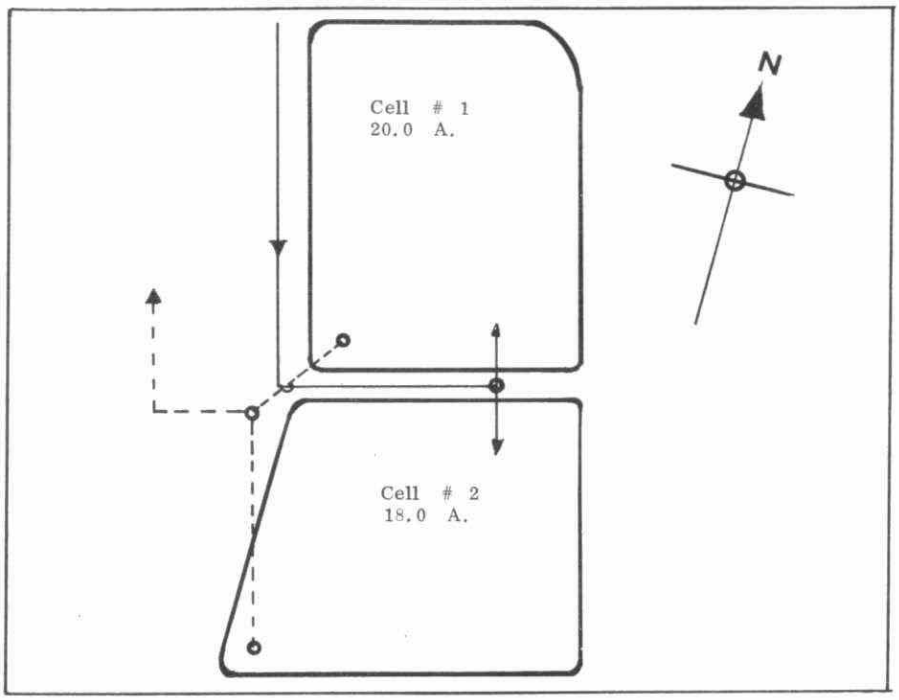
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 760 Igpm
Pump 2 : 760 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001462 LAKEFIELD LAGOON

MUNICIPALITY : LAKEFIELD
REGION : 03 CENTRAL

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,266

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.240 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	9.684	.312	.630		32.0				75.0				7.1			
FEB	7.371	.263	.346		*				*				*			
MAR	10.418	.336	.603		110.0	20.0	81	9.3	155.0	21.0	86	13.9	6.2	4.3	30	.1
APR	16.686	.556	.760		70.0	*			92.0	*			7.1	*		
MAY	11.062	.354			*	17.0			*	20.0			*	1.4		
JUN	6.725	.224			150.0				100.0				6.4			
JUL	5.847	.188	.304		*				*				*			
AUG	5.669	.183	.206		160.0				125.0				*			
SEP	7.056	.235	.265		60.0				55.0				5.8			
OCT	6.143	.207	.310		60.0				55.0				5.8			
NOV	6.746	.229	.324		*	*			*	*			*	*		
DEC	6.719	.217	.431		100.0				115.0				5.5			
TOTAL	100.126							9.3				13.9				.1
AVERAGE		.275	MAXIMUM .760		92.7	18.5	80		96.5	20.5	78		6.2	2.8	54	
NO. OF SAMPLES					8	11			8	11			8	11		

Waste Stabilization Pond

PROJECT : MADOC

Cell Acreage : 15 + 15

Total Acreage : 30

Commenced Operation : Sept. 1972

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

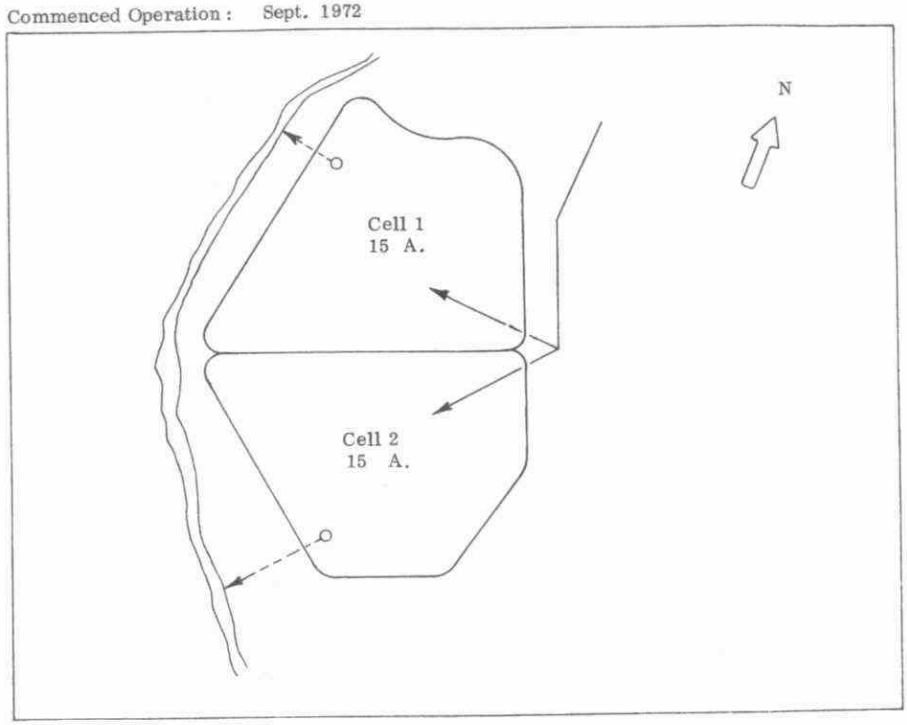
Flow Measurement :

- ■ Flow Meter (Parshall Flume)
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 : (GRAVITY FLOW)

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001051 MADOC LAGOON

MUNICIPALITY : MADOC
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,240

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.540	.178			54.0				70.0				4.1			
FEB	4.834	.172			60.0				100.0				6.5			
MAR	7.507	.242			88.0				110.0				4.8			
APR	11.210	.374			35.0	7.0	80	3.1	60.0	10.0	83	5.6	2.4	1.1	54	.1
MAY	4.724	.152			22.0	6.0	72	.7	35.0	10.0	71	1.1	3.6	.3	91	.1
JUN	3.537	.117			100.0				95.0				6.6			
JUL	4.531	.146			60.0				55.0				4.3			
AUG	3.546	.114			147.0				187.0				9.6			
SEP	3.708	.130														
OCT	3.019	.097			85.0	6.0	92	2.3	100.0	30.0	70	2.1	5.1	1.3	74	.1
NOV	3.164	.105			128.0	2.2	98	3.9	131.0	10.0	92	3.8	6.9	.4	94	.2
DEC	4.078	.131			115.0				115.0				5.6			
TOTAL	59.398							10.0				12.6				.5
AVERAGE		.163	MAXIMUM		81.2	5.3	93		96.1	15.0	84		5.4	.7	85	
NO. OF SAMPLES					19	17			19	17			19	17		

Waste Stabilization Pond

PROJECT : OMEMEE

Cell Acreage : 9.0 + 9.0

Total Acreage : 18.0

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ☐ Annual
- ■ Other : Spray Irrigation

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

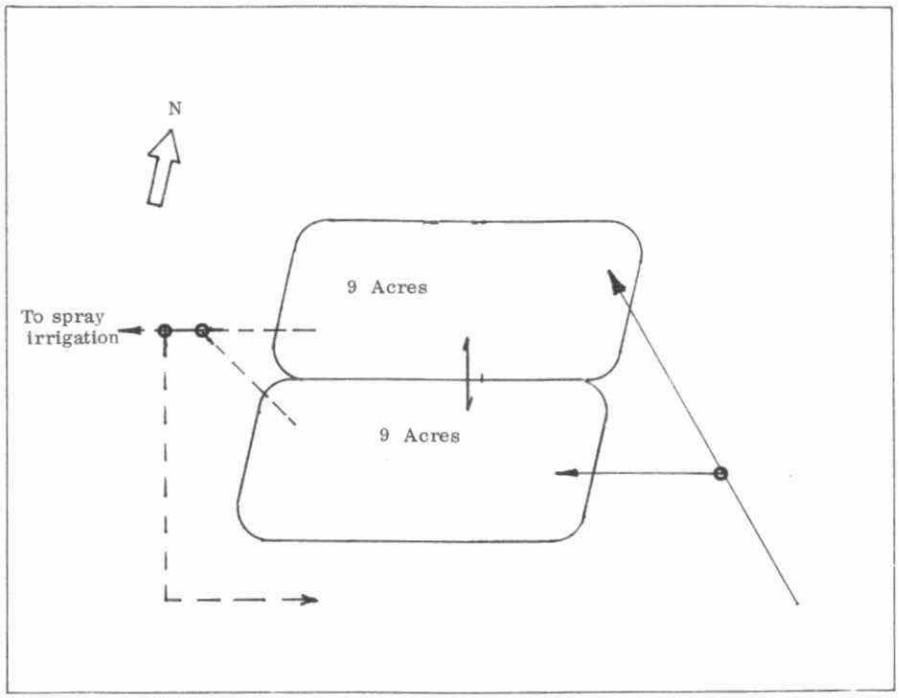
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001630 OMEMEE LAGOON

MUNICIPALITY : OMEMEE
REGION : 03 CENTRAL

TREATMENT FACILITY : LAGOON AND SPRAY PHOSPHORUS REMOVAL

CURRENT POPULATION : 786

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.135 MIGD DESIGN BOD5 : 170.0 MG/L DESIGN SUSP.SOLIDS : 200.0 MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.487	.048	.090													
FEB	.996	.036	.051													
MAR	1.709	.055	.110		134.0				275.0				9.4			
APR	2.752	.092	.171		230.0				490.0				14.0			
MAY	1.540	.050	.099		120.0	6.5	94	1.7	455.0	9.0	98	6.8	7.4	2.3	68	
JUN	.922	.030	.035		370.0	3.1	99	3.3	735.0	7.0	99	6.7	12.0	2.1	82	
JUL	.726	.023	.042		160.0	2.0	98	1.1	195.0	10.0	94	1.3	8.6	1.3	84	
AUG	.722	.023	.029													
SEP	.800	.027			60.0	2.0	96	.4	90.0	7.0	92	.6	5.5	.2	95	
OCT	.988	.032	.042			1.8				.5				.3		
NOV	1.069	.036	.068													
DEC	.951	.031	.040		100.0				125.0				7.3			
TOTAL	14.662							6.5				15.4				
AVERAGE		.040	MAXIMUM .171		167.7	3.0	98		337.8	6.7	98		9.1	1.2	86	
NO. OF SAMPLES					7	5			7	5			7	5		

Ministry of the Environment
Ontario

Southeastern Region
④

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KINGSTON
133 Dalton St.
613-549-4000

DISTRICT OFFICES
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613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

Waste Stabilization Pond

PROJECT : ALFRED

Cell Acreage : 22.1 + 22.1

Total Acreage : 44.2

Commenced Operation : Nov. 1975

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ■ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

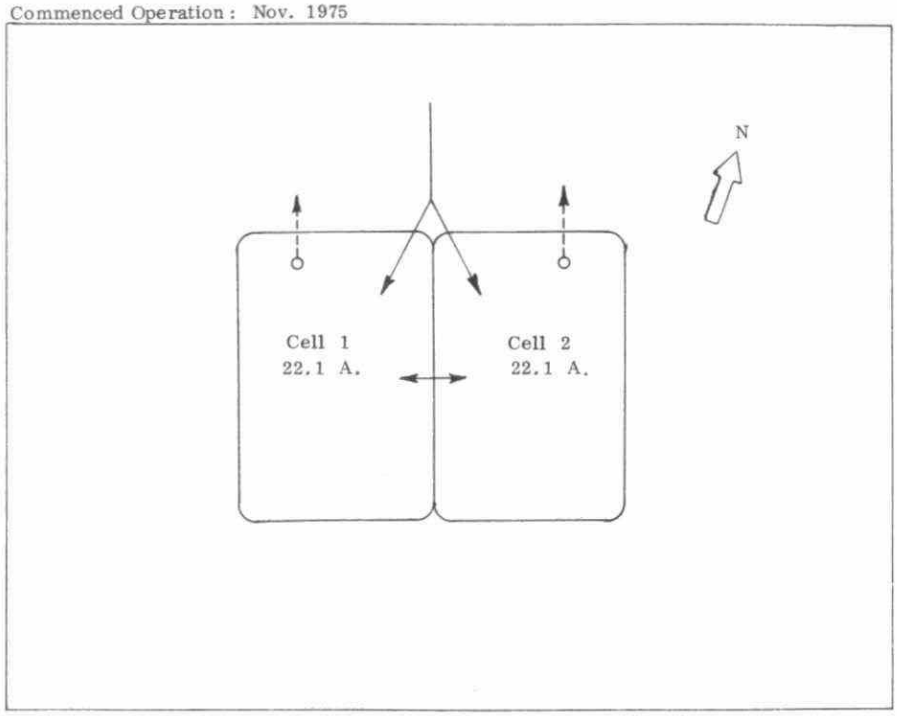
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 437 I gpm
Pump 2 : 437 I gpm

Total Cap : 699 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001836 ALFRED LAGOON — MUNICIPALITY : ALFRED, REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON ANNUAL — CURRENT POPULATION : 1,100

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.157 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	FLOW DATA				BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				TOTAL PHOSPHORUS			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.587	.115	.179		190.0				222.5				11.5			
FEB	2.788	.099	.177		190.0				285.0				12.9			
MAR	3.376	.108	.130		165.0				532.5				8.3			
APR	3.782	.126			92.5	6.0	93	3.2	220.0	20.6	90	7.5	3.6	1.6	54	
MAY	3.578	.115	.137		135.0	12.9	90	4.3	182.5	29.1	84	5.4	7.6	1.1	84	.2
JUN	2.816	.093	.116		170.0				122.5				6.6			
JUL	2.949	.095	.114		160.0				160.0				8.2			
AUG	2.628	.093	.116		70.0				122.5				6.6			
SEP	2.759	.091	.133		155.0				130.0				5.8			
OCT	2.918	.094	.133		270.0				100.0				8.3			
NOV	4.351	.145	.208		74.5				105.0				6.5			
DEC	2.977	.096	.126		90.0				115.0				7.1			
TOTAL	38.509							7.5				12.9				.2
AVERAGE		.106	MAXIMUM .208		146.8	9.4	93		191.4	24.8	87		7.7	1.4	81	
NO. OF SAMPLES					22	15			22	15			22	15		

Waste Stabilization Pond

PROJECT : CASSELMAN

Cell Acreage :

Total Acreage :

Commenced Operation: March 1978

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ☑ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002201 CASSELMAN LAGOON

MUNICIPALITY : CASSELMAN
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL * COMMENT: LAGOON CONSTRUCTION COMPLETED IN SUMMER OF 1978.

CURRENT POPULATION : 1,585

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR	3.914	.130	.223		155.0	14.0	90	5.5	140.0	58.0	58	3.2	4.4	.2	94	.1
MAY	2.480	.080	.147		90.0	9.5	89	1.9	92.5	73.8	20	.4	7.7	.3	95	.1
JUN	2.288	.076	.109		92.5				60.0				6.2			
JUL	2.280	.073	.097		390.0				1192.0				17.4			
AUG	*	*			*				*				*			
SEP	2.710	.091	.111		137.5				235.0				8.8			
OCT	3.281	.106	.191		205.0				252.0				13.0			
NOV	2.800	.094	.144		210.0	2.5	98	5.8	330.0	12.5	96	8.8	16.0	.9	94	.4
DEC	2.845	.091	.117		175.0				120.0				8.7			
TOTAL	22.598							13.2				12.4				.6
AVERAGE		.093	MAXIMUM .223		181.8	8.6	95		302.6	48.1	84		10.2	.5	95	
NO. OF SAMPLES					16	9			16	9			16	9		

Waste Stabilization Pond

PROJECT : CHESTERVILLE

Cell Acreage : 14.5

Total Acreage : 14.5

Commenced Operation : Nov. 1970

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

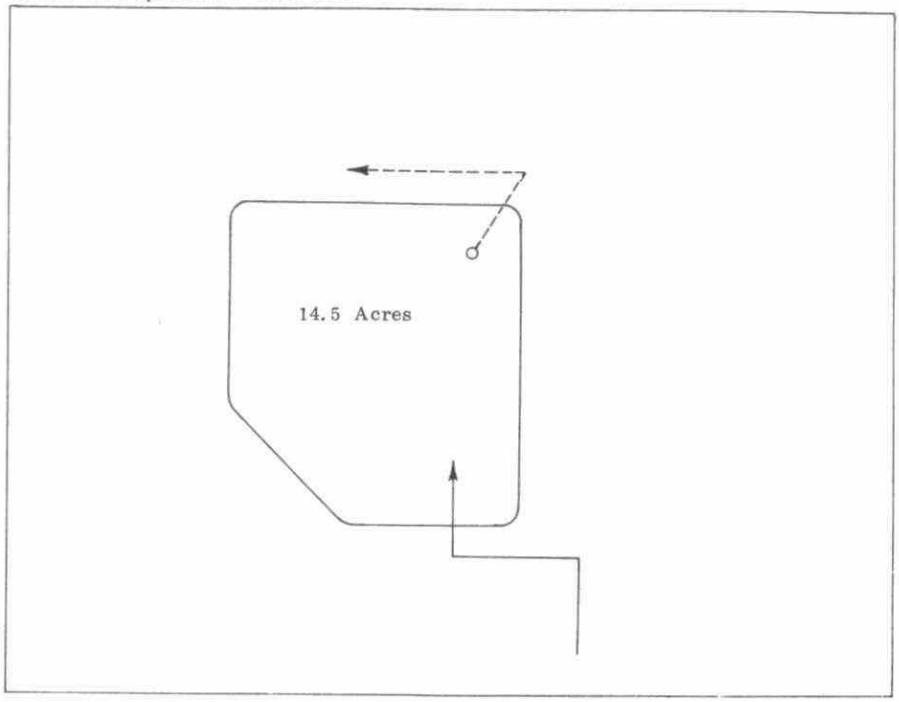
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 320 I gpm
Pump 2 : 320 I gpm

Total Cap : 430 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000114 CHESTERVILLE LAGOON

MUNICIPALITY : CHESTERVILLE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 1,423

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.160 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.864	.189	.514		62.5				51.5				3.3			
FEB	3.195	.114	.184		*				*				*			
MAR	5.626	.181	.507		31.0				44.5				3.6			
APR	11.086	.369	.584		35.0				67.5				23.0			
MAY	3.753	.121	.388		64.0				85.0				*			
JUN	2.976	.099	.374		97.5				105.0				7.6			
JUL	2.517	.081	.117		82.5				102.5				6.9			
AUG	2.444	.078	.128		*				*				*			
SEP	2.261	.075	.157		87.5				75.0				7.9			
OCT	2.042	.066			120.0				143.0				8.0			
NOV	2.725	.091			125.0				67.5				5.6			
DEC	*	*			*				*				*			
TOTAL	44.489															
AVERAGE		.133	MAXIMUM .584		78.3				82.3				8.2			
NO. OF SAMPLES					15				15				13			

Waste Stabilization Pond

PROJECT : GOULBOURN TWP. (RICHMOND)

Cell Acreage : 11 + 12.5 + 12.5

Total Acreage : 36.0

Commenced Operation: May 1971
First Expansion: Added 12.5 acres May 1973
Second Expansion : Added 12.5 acres Jan. 1975

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

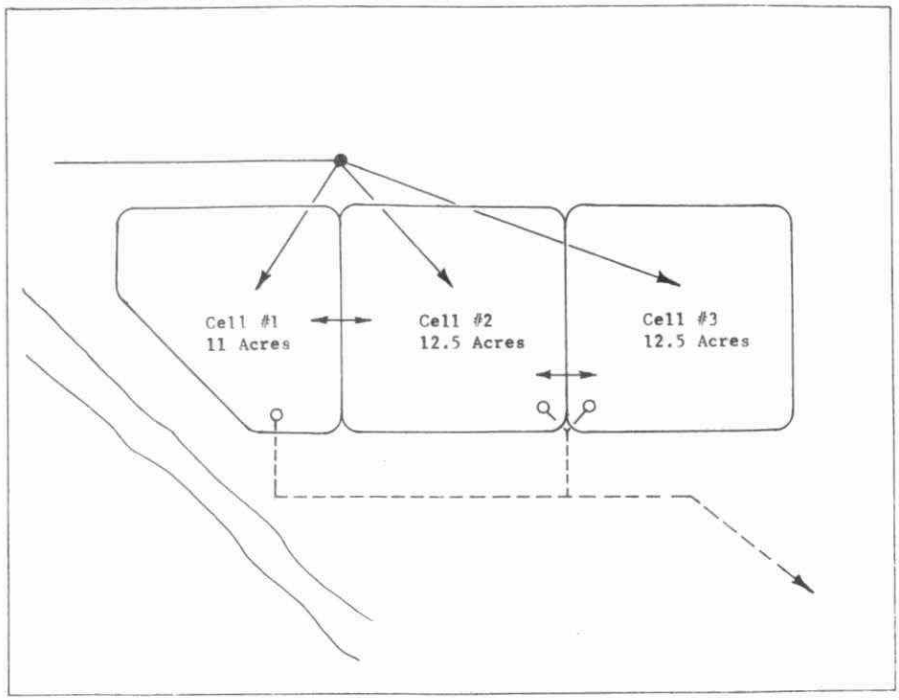
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 480 I gpm
Pump 2 : 480 I gpm

Total Cap : N/A



Signifigant Industries: NIL

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001140 RICHMOND LAGOON

MUNICIPALITY : GOULBOURN RICHMOND
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 9,327

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.310 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	14.410	.465	1.257		14.5				35.0				2.1			
FEB	14.320	.511	.970		29.0				21.5				3.0			
MAR	15.100	.487			72.0				92.5				2.3			
APR	16.990	.566			16.5	9.3	43	1.2	17.0	10.8	36	1.0	1.3	7.5	-	-
MAY	9.350	.302			35.0	4.1	88	2.8	38.0	6.9	81	2.9	2.2	.1	93	.1
JUN	7.240	.240	.270		29.0				25.0				3.3			
JUL	5.970	.190	.300		34.0				20.0				1.0			
AUG	5.460	.176	.280		47.5				44.0				4.3			
SEP	4.590	.150	.170		162.5				157.5				9.3			
OCT	4.820	.155	.250		92.5				82.5				6.9			
NOV	4.800	.160	.180		92.5	5.7	93	4.1	75.0	30.8	58	2.1	6.5	1.0	84	.2
DEC	5.810	.180	.200		100.0				135.0				9.4			
TOTAL	108.860							8.1				6.0				.3
AVERAGE		.299	MAXIMUM 1.257		60.4	6.3	89		61.9	16.1	73		4.3	2.8	32	
NO. OF SAMPLES					22	20			22	20			22	20		

Waste Stabilization Pond

PROJECT : LANCASTER

Cell Acreage : 17.1 + 8.9

Total Acreage : 26

Commenced Operation: December 1977

Operation :

- ■ Series
- ■ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

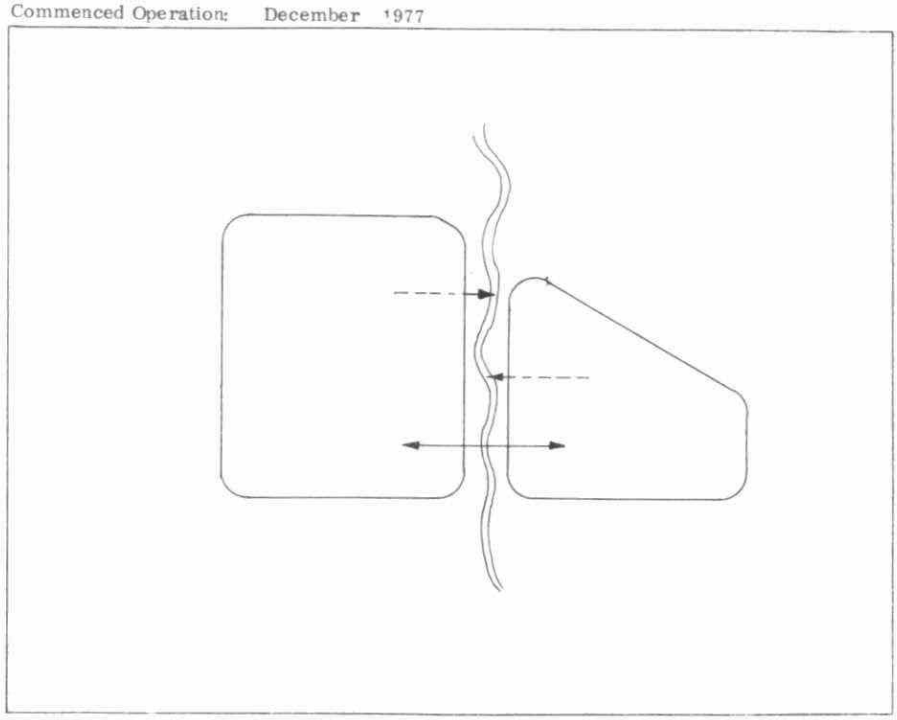
Flow Measurement :

- □ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001925 LANCASTER LAGOON

MUNICIPALITY : LANCASTER
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 587

* NO DISCHARGE IN 1978, THE VALUES SHOWN FOR 'EFFLUENT' ARE 'CELL CONTENTS'.

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.130 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	2.819	.091														
FEB	2.304	.082														
MAR	3.148	.102														
APR	4.361	.145	.214													
MAY	3.959	.127	.142													
JUN	** 3.160	.105	.134		85.0				150.0				2.0			
JUL	2.375	.076	.109		70.0				100.0				3.5			
AUG	2.348	.076			85.0				100.0				6.3			
SEP	1.947	.065	.087													
OCT	1.829	.059				*(.8)				*(5.0)				*(.4)		
NOV	2.036	.068				*(21.0)				*(98.0)				*(.3)		
DEC	1.895	.061	.094		331.0				853.0				9.5			
TOTAL	32.181															
AVERAGE		.088	MAXIMUM .214		142.7	10.9	92		300.7	51.5	82		5.3	.3	93	
NO. OF SAMPLES					5	2			5	2			5	2		

Waste Stabilization Pond

PROJECT : LEEDS & LANSDOWNE

Cell Acreage : 6.3 + 5.8

Total Acreage : 12.1

Commenced Operation: January 1977

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ■ Other : Spray Irrigation

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

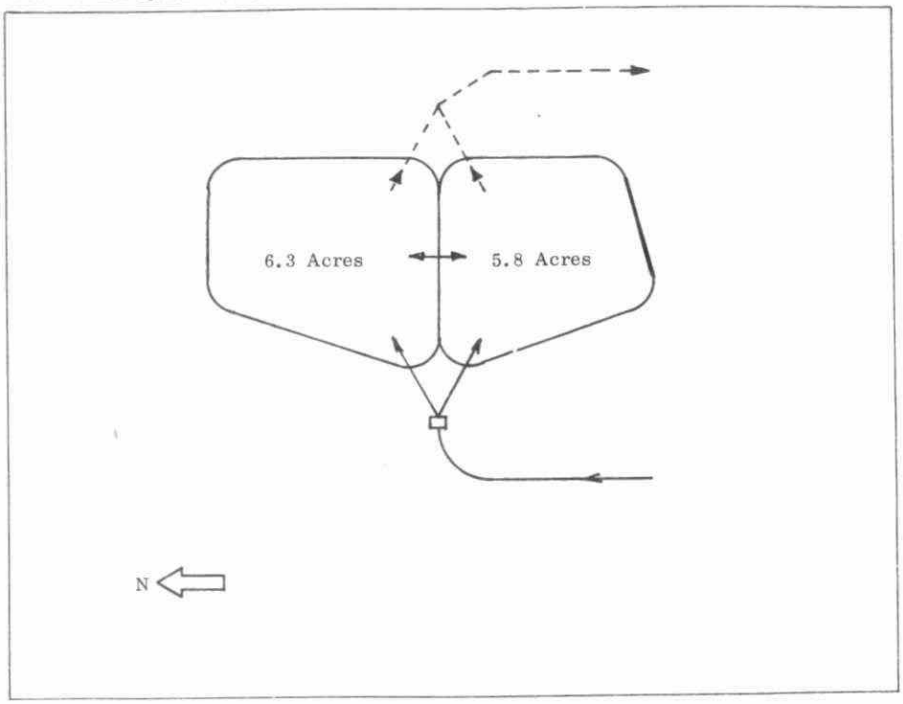
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 235 Igpm
Pump 2 : 235 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001934 LANSDOWNE LAGOON -

MUNICIPALITY : LEEDS & LANSDOWNE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : LAGOON AND SPRAY

CURRENT POPULATION : 4,049

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.110 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	.926	.030	.139													
FEB	.555	.020	.026		110.0				180.0				11.0			
MAR	.887	.029	.048		60.0				60.0				5.6			
APR	.956	.032	.048		14.5				23.5				2.1			
MAY	.579	.019	.022			2.7				5.7				.2		
JUN	.500	.017	.019		65.0				45.0				6.8			
JUL	.472	.015	.022		180.0				125.0				9.4			
AUG	.516	.017	.059		30.0				100.0				7.5			
SEP	.497	.016	.020		85.0				50.0				7.5			
OCT	.535	.017	.020		145.0				120.0				11.0			
NOV	.536	.018	.024													
DEC	.717	.023	.024		185.0				130.0				10.0			
TOTAL	7.676															
AVERAGE		.021	MAXIMUM .139		97.1	2.7	97		92.6	5.7	93		7.8	.2	97	
NO. OF SAMPLES					10	21			10	7			10	21		

Waste Stabilization Pond

PROJECT : PLANTAGENET

Cell Acreage : 17 Acres

Total Acreage : 17 Acres

Commenced Operation: Spring 1977

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

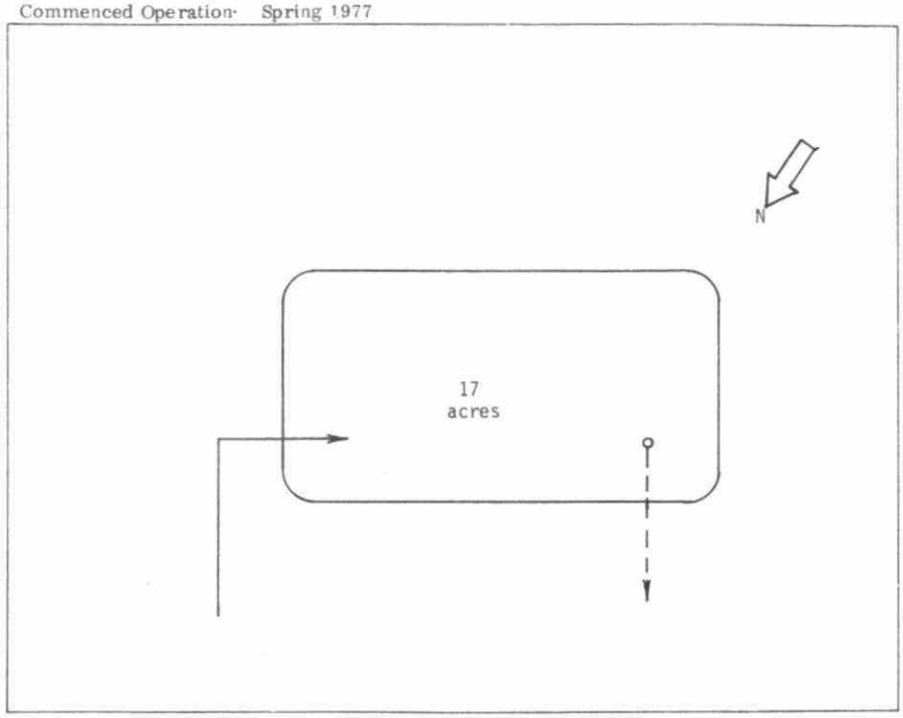
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 430 I gpm
Pump 2 : 430 I gpm

Total Cap : 860 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001621 PLANTAGENET LAGOON

MUNICIPALITY : PLANTAGENET
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 949

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.158 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.043	.130	.347		672.5				1238.0				10.7			
FEB	2.784	.099	.133		57.5				160.0				2.4			
MAR	3.504	.113	.370		240.0				360.0				12.5			
APR	7.056	.252	.424		135.0	10.0	92	8.8	510.0	15.0	97	34.9	7.0	2.6	62	.3
MAY	3.338	.107	.131		82.5	13.6	83	2.3	127.5	28.6	77	3.3	5.2	1.4	72	.1
JUN	2.629	.087	.098		87.5				92.5				7.2			
JUL	2.289	.073	.118		135.0				157.5				11.8			
AUG	2.011	.071	.096		51.5				65.0				5.7			
SEP	2.377	.079			95.0				75.0				9.2			
OCT	2.583	.083	.107		155.0				175.0				11.6			
NOV	2.714	.090	.112		117.5				140.0				9.4			
DEC	2.625	.084	.145		315.0				400.0				13.5			
TOTAL	37.953							11.1				38.2				.4
AVERAGE		.106	MAXIMUM .424		178.6	11.8	93		291.7	21.8	92		8.8	2.0	76	
NO. OF SAMPLES					23	8			23	8			23	8		

Waste Stabilization Pond

PROJECT : ROCKLAND

Cell Acreage : 19.8

Total Acreage : 19.8

Commenced Operation : 1964

Operation :

- ☐ Series
- ☐ Parallel (SINGLE CELL)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

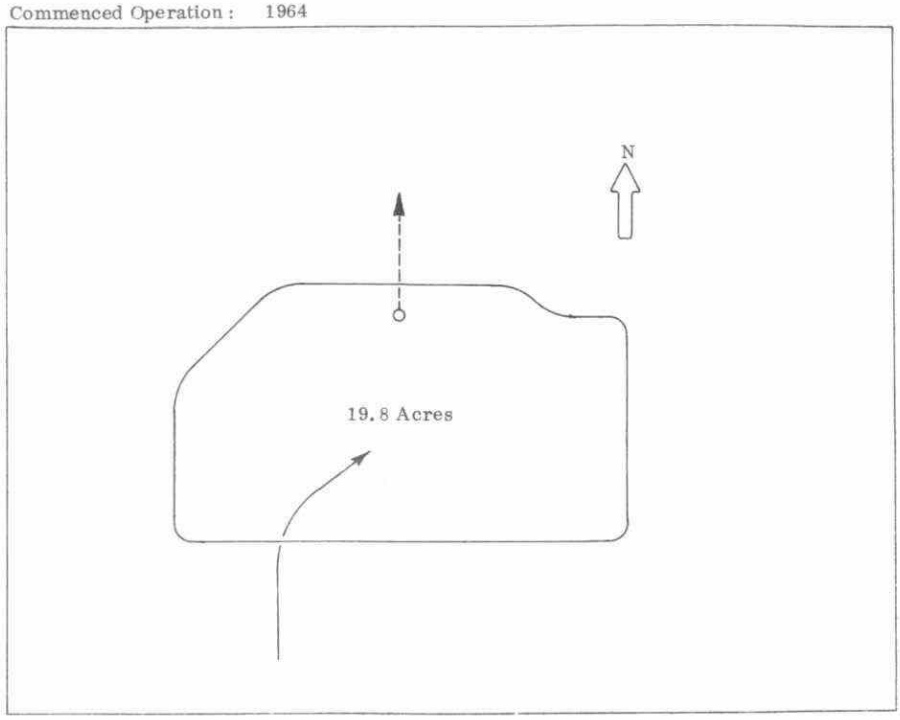
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 693.65 I gpm
Pump 2 : 657.10 I gpm

Total Cap : 1080 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001159 ROCKLAND LAGOON

MUNICIPALITY : ROCKLAND
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 4,040

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	9.430	.300	.513		42.3				47.6				4.5			
FEB	6.311	.222	.265		50.5				43.7				4.4			
MAR	8.860	.286	.530		101.2				166.0				6.0			
APR	19.024	.634	.987		19.0	12.0	36	1.3	22.0	16.5	25	1.0	1.9	1.8	5	
MAY	6.806	.226	.295		21.7	12.7	41	.6	23.0	41.2	-	-	3.6	1.2	64	.1
JUN	6.775	.242	.309		54.5				31.2				41.5			
JUL	4.877	.162	.227		65.0				43.2				6.3			
AUG	4.852	.157	.175		45.7				56.2				5.0			
SEP	4.688	.155	.173		72.5				32.5				5.2			
OCT	5.318	.171	.245		82.5				62.5				7.2			
NOV	5.619	.187	.285		109.2	20.0	81	5.0	50.0	46.0	8	.2	6.1	5.2	14	
DEC	5.363	.173	.207		72.0				88.3				7.3			
TOTAL	87.923							6.9				1.2				.1
AVERAGE		.243	MAXIMUM .987		61.3	14.9	75		55.5	34.5	37		8.2	2.7	66	
NO. OF SAMPLES					44	11			44	11			44	11		

Waste Stabilization Pond

PROJECT : ST. ISIDORE DE PRESCOTT

Cell Acreage :

Total Acreage : 39.0

Commenced Operation: July 1977

Operation :

- ■ Series
- ■ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

Flow Measurement :

- □ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110002210 ST ISIDORE LAGOON — MUNICIPALITY : ST. ISIDORE DE PRESCOTT
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL — COMMENT: NO DISCHARGE IN 1978 — CURRENT POPULATION : 743
LAGOON CONSTRUCTION COMPLETED IN SUMMER 1977

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.144 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR	1.306	.044	.064		390.0				655.0				17.5			
MAY	.948	.031	.054		245.0				1070.0				12.0			
JUN	.828	.028	.044		245.0				148.0				8.4			
JUL	.783	.025	.036		505.0				970.0				12.9			
AUG																
SEP	.960	.032	.057		445.0				850.0				22.0			
OCT	1.064	.034	.058		600.0				905.0				21.5			
NOV	1.040	.035	.068		300.0				390.0				24.0			
DEC	1.076	.035	.044		390.0				410.0				17.0			
TOTAL	8.005															
AVERAGE		.033	MAXIMUM .068		390.0				674.7				16.9			
NO. OF SAMPLES					16				16				16			

Waste Stabilization Pond

PROJECT : STIRLING

Cell Acreage : 7.0 + 5.6

Total Acreage : 12.6 Acres

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

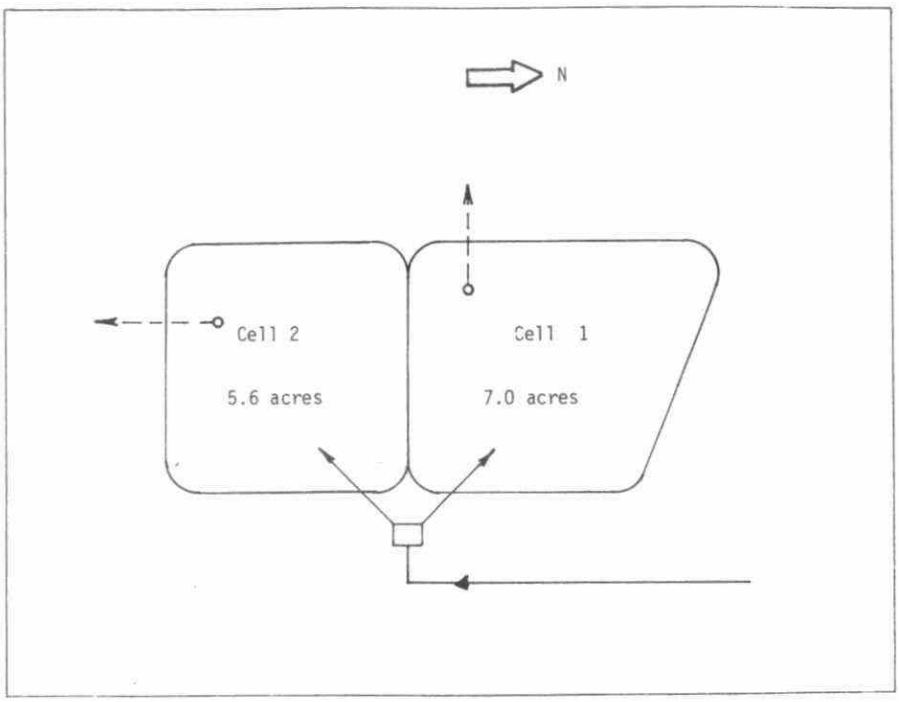
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 350 I gpm
Pump 2 : 350 I gpm

Total Cap : 700 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000686 STIRLING LAGOON

MUNICIPALITY : STIRLING
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,556

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.250 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->			<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION 10(3) %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR																
MAY																
JUN																
JUL	4.358	.141														
AUG	3.798	.123														
SEP	4.160	.139														
OCT	1.846	.059														
NOV																
DEC																
TOTAL	14.162															
AVERAGE			MAXIMUM													
		.116														
NO. OF SAMPLES																

Waste Stabilization Pond

PROJECT : TWEED

Cell Acreage : 15.6 + 15.2

Total Acreage : 30.8 Ac.

Commenced Operation : Mar. 1976

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

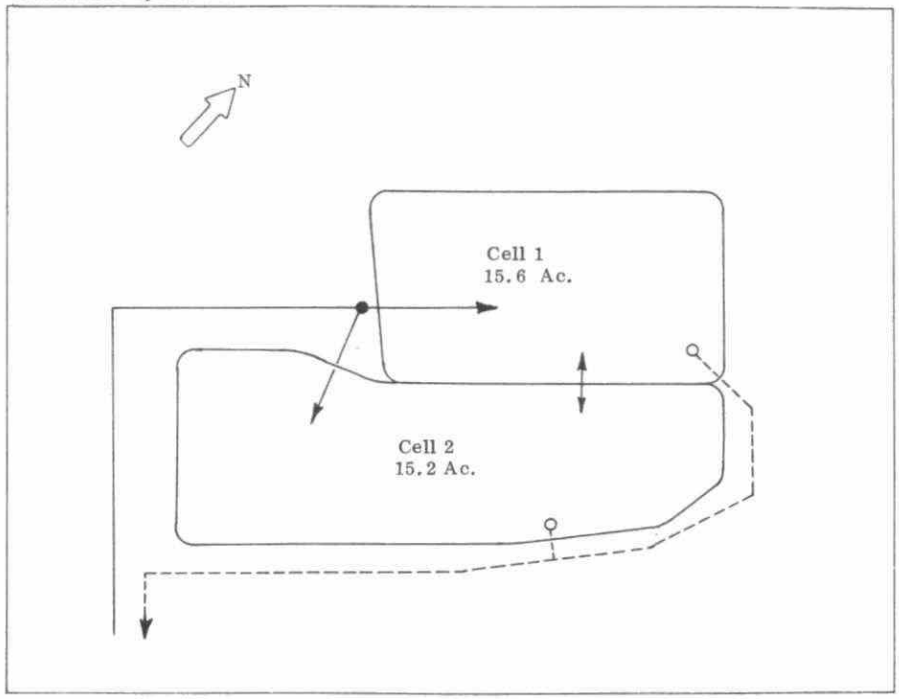
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 750 I gpm
Pump 2 : 750 I gpm

Total Cap : 750 I gpm



Signifigant Industries : Tweed Veneers, Tweed Steel Works, Sawyer Stoll Lumber, Lakewood Forest Products, Rashotte Lumber .

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 120000952 TWEED LAGOON

MUNICIPALITY : TWEED
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,632

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.266 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW * MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN																
FEB																
MAR																
APR						6.0				5.0				.7		
MAY						6.0				10.0				.4		
JUN																
JUL																
AUG																
SEP																
OCT	5.590	.180														
NOV	7.434	.248				2.6				5.0				.5		
DEC	8.364	.270														
TOTAL	21.388															
AVERAGE		.233	MAXIMUM			4.8				6.6				.5		
NO. OF SAMPLES						9				9				9		

Waste Stabilization Pond

PROJECT : VANKLEEK HILL

Cell Acreage : 10 + 10 + 10

Total Acreage : 30 Acres

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

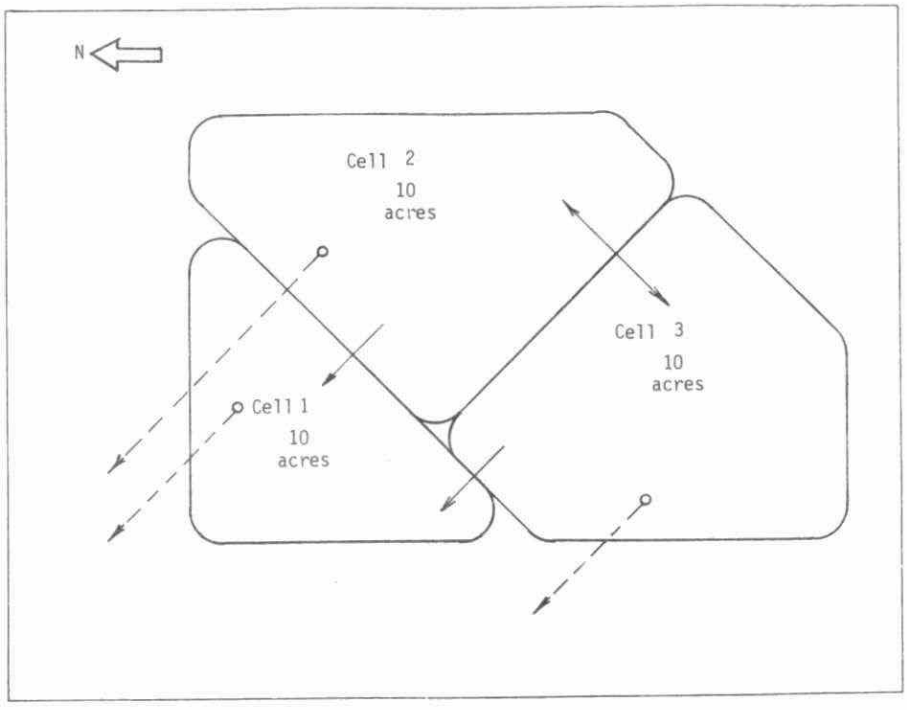
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 720 I gpm
Pump 2 : 720 I gpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001658 VANKLEEK HILL LAGOON

MUNICIPALITY : VANKLEEK HILL
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 1,634

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN	3.849	.125			600.0				400.0				18.0			
FEB	3.350	.120			230.0				250.0				19.0			
MAR	4.226	.136			200.0				165.0				5.8			
APR	8.881	.296			13.0				12.0				3.0			
MAY																
JUN	2.813	.097	.177		145.0				130.0				9.1			
JUL	2.801	.090	.122		100.0				85.0				7.6			
AUG	2.744	.089	.116		120.0				215.0				.1			
SEP	2.494	.089	.106		180.0				110.0				15.0			
OCT	3.164	.102			355.0				310.0				15.0			
NOV	3.142	.105			185.0				240.0							
DEC	2.866	.102			185.0				165.0				8.4			
TOTAL	40.330															
AVERAGE		.123	MAXIMUM .177		210.2				189.2				10.1			
NO. OF SAMPLES					12				12				11			

Waste Stabilization Pond

PROJECT : WESTPORT

Cell Acreage : 7 Acres

Total Acreage : 7 Acres

Commenced Operation: Feb. 1974

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

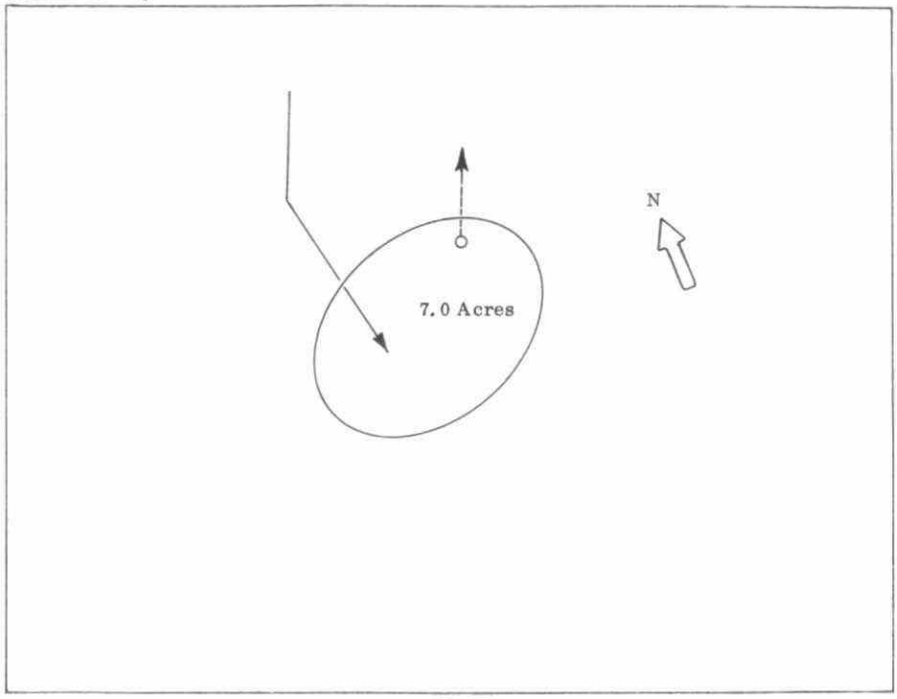
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 300 I gpm
Pump 2 : 300 I gpm

Total Cap : 350 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001550 WESTPORT LAGOON

MUNICIPALITY : WESTPORT
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 686

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.072 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.417	.047	.098		23.0				26.0				3.8			
FEB	1.391	.050	.052		44.0				155.0				4.9			
MAR	1.719	.055	.071		50.0				50.0				4.9			
APR	2.069	.069	.103		30.0	6.5	78	.4	35.0	8.0	77	.5		.6		
MAY	1.472	.047	.065		80.0	19.0	76	.8	85.0	19.8	76	.9	6.2	.8	87	
JUN	1.119	.037	.049													
JUL	1.339	.043	.054		80.0				55.0				6.1			
AUG	1.315	.042	.056		60.0				40.0				5.7			
SEP	1.170	.039	.049		75.0				40.0				5.0			
OCT	1.132	.038	.046		65.0				55.0				7.4			
NOV	1.091	.036	.050		150.0	12.7	91	1.4	100.0	22.1	77	.8	7.7	.6	92	
DEC	1.406	.045	.058		85.0				50.0				7.0			
TOTAL	16.640							2.6				2.2				
AVERAGE		.046	MAXIMUM .103		67.4	12.7	81		62.8	16.6	73		5.8	.6	88	
NO. OF SAMPLES					11	15			11	15			10	15		

Waste Stabilization Pond

PROJECT : WINCHESTER

Cell Acreage : 7.7 + 9.0

Total Acreage : 16.7

Commenced Operation : (7.7 Acre Cell) : 1960
Second Cell Added (9.0 Acre Cell) : 1971

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

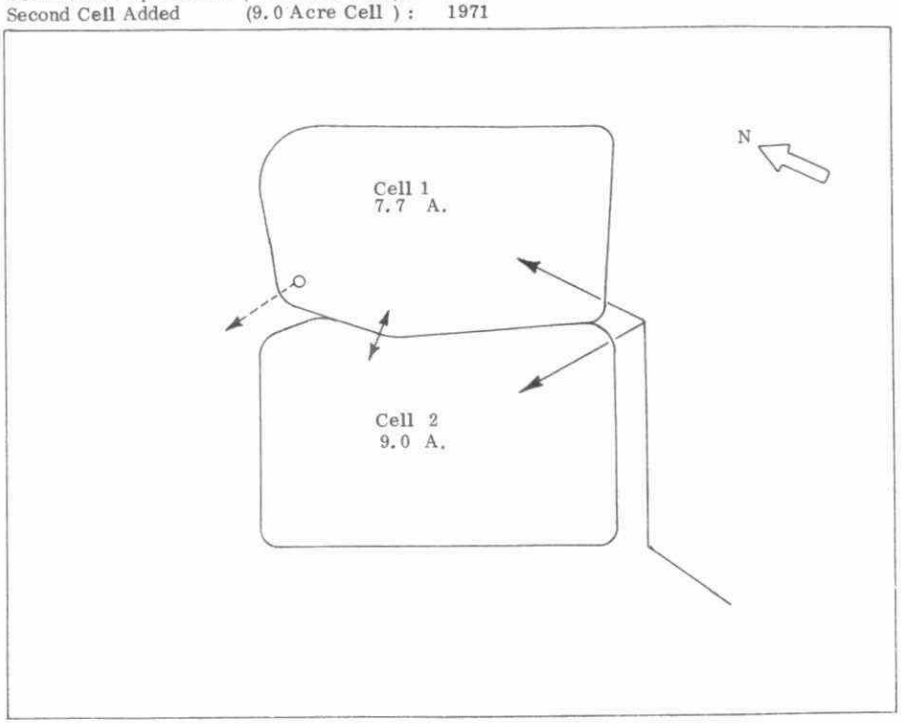
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 480 US gpm
Pump 2 : 480 US gpm

Total Cap : 460 US gpm



Signif igant Industry : 130 Bed Hospital

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001202 WINCHESTER LAGOON

MUNICIPALITY : WINCHESTER
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 1,866

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->									
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	6.108	.197	.443		57.5				120.0				5.2			
FEB	4.011	.143	.221													
MAR	5.820	.188	.488		57.5				112.5				6.1			
APR	9.988	.333	.447		40.0	*			102.5	*			3.6	*		
MAY	4.793	.155	.221		87.5	*			142.5	*				*		
JUN	4.130	.137	.165		135.0				215.0				9.5			
JUL	3.667	.118	.141		127.5				190.0				6.7			
AUG	3.839	.124	.161													
SEP	3.156	.105	.131		152.5				270.0				10.2			
OCT	3.546	.114			118.0	*			140.0	*			8.4	*		
NOV	3.400	.113			178.0				165.0				8.9			
DEC	3.995	.129			107.0				102.0				9.2			
TOTAL	56.453															
AVERAGE		.155	MAXIMUM .488		106.0				155.9				7.5			
NO. OF SAMPLES					17				17				15			

Ministry of the Environment
Ontario

Northeastern Region
5

REGIONAL OFFICE

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199 Larch St.
705-675-4501

DISTRICT OFFICES

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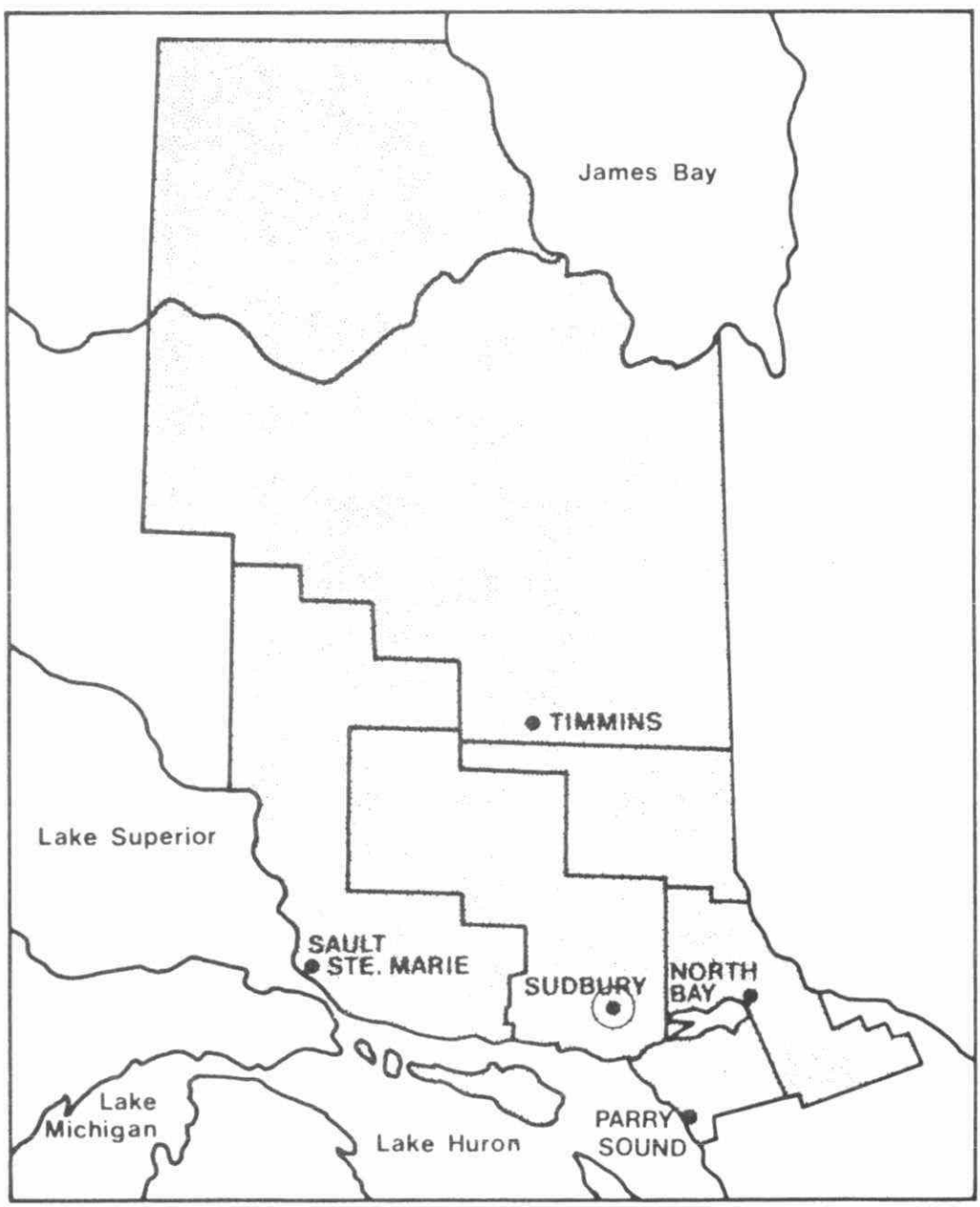
1500 Fisher St.
705-476-1001

Sault Ste. Marie
445 Albert St. E.
705-949-4640

Timmins
83 Algonquin Blvd. W.
705-264-9474

Parry Sound
74 Church St.
705-746-2139



Waste Stabilization Pond

PROJECT : (MANITOWANING)
ASSIGINACK

Cell Acreage : 3.8 + 3.8

Total Acreage : 7.6 Acres

Commenced Operation: February 1976

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ■ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

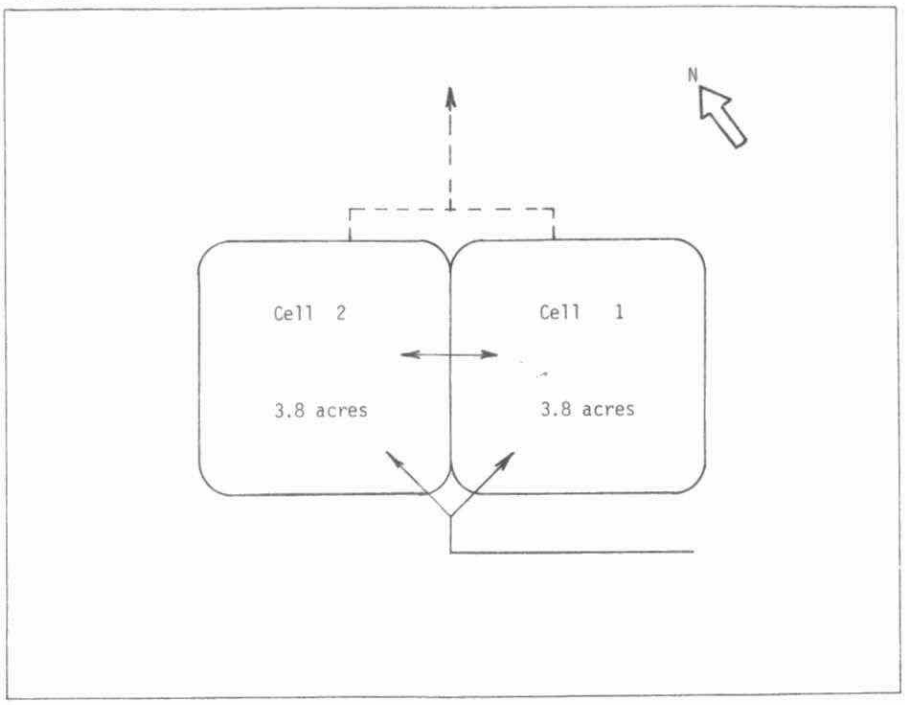
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 404 I gpm
Pump 2 : 404 I gpm

Total Cap : 610 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001408 MANITOWANING LAGOON

MUNICIPALITY : ASSIGINACK
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 860

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.120 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.459	.047			188.0				249.0				9.8			
FEB	.847	.030			478.0				965.0				14.5			
MAR	1.219	.039			222.0				267.0				9.9			
APR	2.699	.090														
MAY	1.894	.061			46.0				42.5				2.7			
JUN	1.118	.037	.040		22.0				35.0				1.8			
JUL	1.270	.041	.059		100.0				120.0				2.3			
AUG	1.314	.042	.049		43.0				37.5				3.5			
SEP	1.475	.049	.059		52.0				52.5				3.5			
OCT	1.562	.050	.071		57.0	3.6	93	.8	72.5	8.2	88	1.0	3.5	.6	80	
NOV	1.430	.048			82.5				85.0				5.2			
DEC	1.448	.047	.067		395.0				901.0				19.5			
TOTAL	17.735							.8				1.0				
AVERAGE		.048	MAXIMUM .071		153.2	3.6	97		257.0	8.2	96		6.9	.6	90	
NO. OF SAMPLES					25	6			21	6			23	6		

Waste Stabilization Pond

PROJECT : BLACK RIVER MATHESON (RAMORE lagoon)

Cell Acreage : 3.8

Total Acreage : 3.8

Commenced operation: April 1962

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

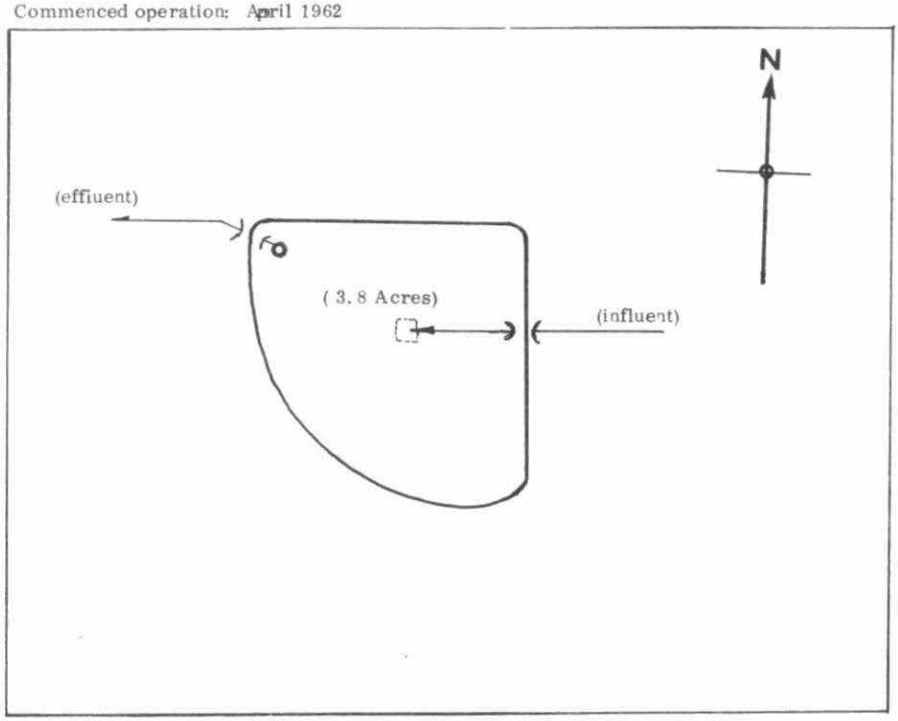
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 120 Igpm
Pump 2 : 120 Igpm

Total Cap : 130 Igpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001104 RAMORE LAGOON

MUNICIPALITY : BLACK R.MATHESON (R.)
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 3,567

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.027 MIGD DESIGN BOD5 MG/L DESIGN SUSP.SOLIDS MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	*	*			370.0				348.0				22.5			
FEB	*	*			190.0				365.0				12.9			
MAR	*	*			315.0				385.0				16.9			
APR	*	*			54.0	24.0	55		105.0	40.0	61		2.0	2.5	-	
MAY	*	*			52.5	13.0	75		60.0	34.0	43		6.7	24.5	-	
JUN	1.463	.048	.117		29.0	27.0	6		75.0	82.5	-	-	2.8	1.7	38	
JUL	1.514	.049			18.0	20.0	-	-	40.0	47.5	-	-	2.0	3.5	-	-
AUG	.770	.025			47.0	40.0	14		62.0	75.0	-	-	4.4	4.3	2	
SEP	.664	.023			95.0	9.0	90	.5	95.0	35.0	63	.3	4.6	2.3	50	
OCT	1.087	.036			72.0	25.0	65	.5	125.0	45.0	64	.8	5.5	2.2	60	
NOV	.823	.027			175.0	17.0	90	1.3	235.0	52.5	77	1.5	10.4	3.4	67	
DEC	.803	.026			102.0	51.0	50	.4	137.0	47.0	65	.7	6.7	5.5	17	
TOTAL	7.124							2.7				3.3				
AVERAGE		.033	MAXIMUM .117		126.6	25.1	80		169.3	50.9	69		8.1	5.5	31	
NO. OF SAMPLES					23	16			23	16			22	15		

Waste Stabilization Pond

PROJECT : BLACK RIVER - MATHESON
(VAL GAGNE)

Cell Acreage : 5

Total Acreage : 5 acres

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

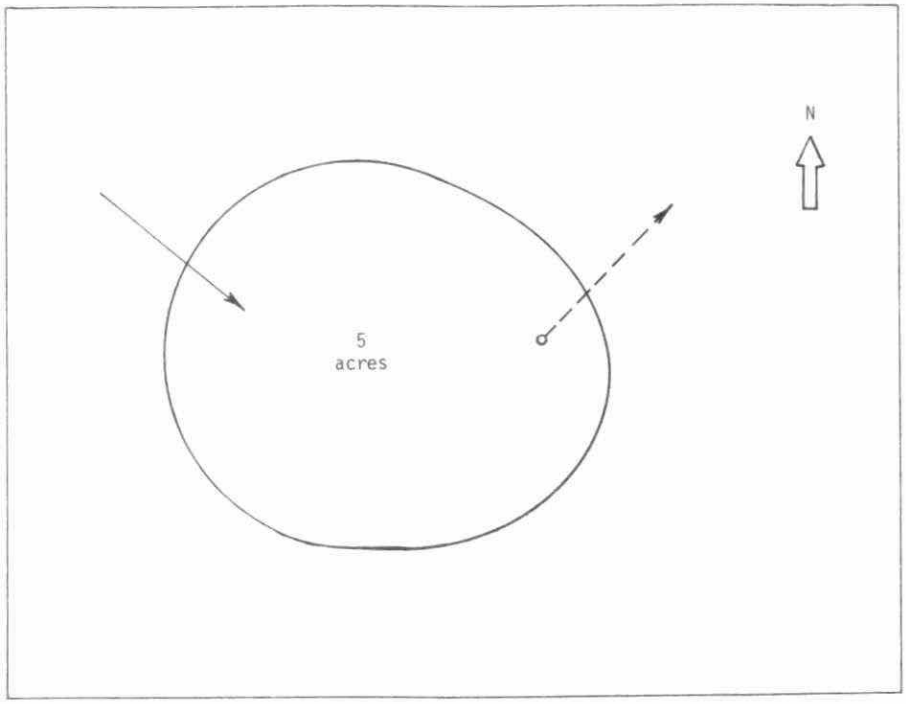
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 120001559 VAL GAGNE LAGOON 5 A 1 CELL

MUNICIPALITY : BLACK R. MATHESON (V.G.)
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 3,796

* COMMENT: NO FLOW DATA AVAILABLE

OPERATING AUTHORITY: MUNICIPALITY

DESIGN CAPACITY : 0.050 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	* FLOW DATA				BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				TOTAL PHOSPHORUS			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	10(3) LBS
JAN/78-DEC/78																
JAN					300.0	14.0	95		600.0	22.0	96		11.0	4.8	56	
FEB					260.0	24.0	90		390.0	27.0	93		11.0	7.8	29	
MAR					130.0	28.0	78		455.0	35.0	92		16.0	10.6	33	
APR					319.0	44.5	86		760.0	100.0	86		7.6	14.7	-	
MAY					21.0	8.8	58		45.0	17.0	62		2.7	.8	70	
JUN					38.0	8.0	78		77.0	10.0	87		5.7	2.7	52	
JUL					115.0	3.5	96		430.0				4.0	2.7	32	
AUG					65.0	3.0	95		130.0	10.0	92		7.4	1.1	84	
SEP					20.0	4.0	80		75.0				2.7	1.4	48	
OCT	*				32.0	.9	97		55.0	5.0	90		7.2	.9	87	
NOV					27.0	.9	96		55.0	5.0	90		1.8	1.7	5	
DEC					28.0	3.0	89		45.0	4.0	91		2.7	2.7		
TOTAL																
AVERAGE			MAXIMUM		112.9	11.8	89		259.7	23.5	90		6.6	4.3	34	
NO. OF SAMPLES					18	18			17	13			18	17		

Waste Stabilization Pond

PROJECT : BRUCE MINES

Cell Acreage : 7.3

Total Acreage : 7.3

Commenced Operation : January 16, 1975

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

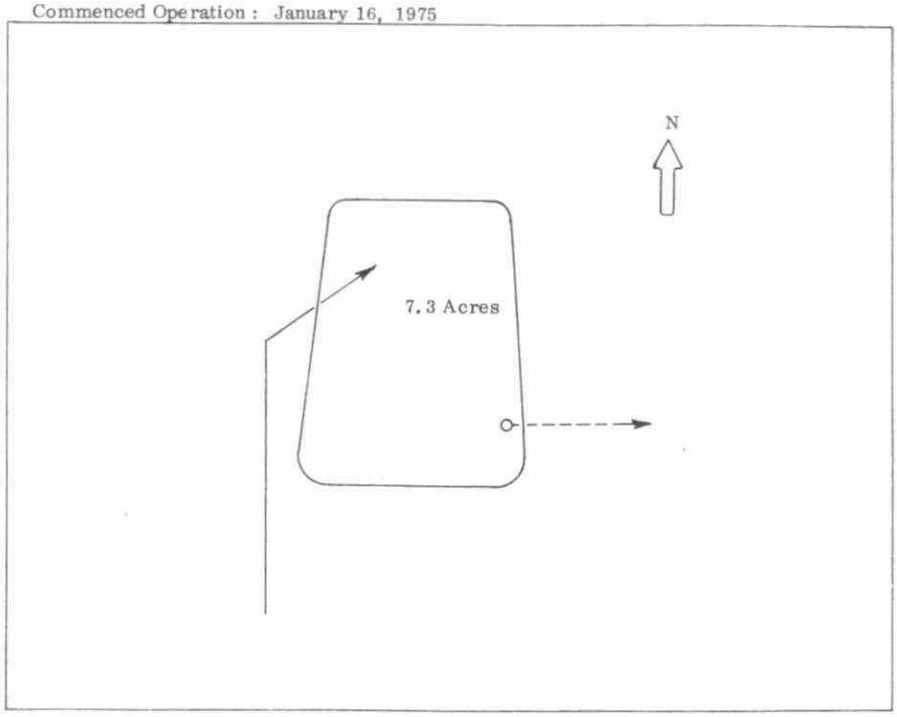
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 207 I gpm
Pump 2 : 207 I gpm

Total Cap : 207 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001756 BRUCE MINES LAGOON — MUNICIPALITY : BRUCE MINES
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL — CURRENT POPULATION : 569

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.070 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.682	.054			110.0				100.0				3.6			
FEB	1.316	.047			60.0				54.0				3.6			
MAR	1.552	.052			260.0				445.0				13.0			
APR	2.929	.101			100.0	14.0	86	2.5	75.0	26.2	65	1.4	3.4	2.3	30	
MAY	2.657	.080			88.3				75.0				4.5			
JUN	1.635	.055			99.5				90.0				4.1			
JUL	1.469	.047			171.3				105.0				9.3			
AUG	1.390	.045			136.3				142.5				6.0			
SEP	1.821	.063			135.0	8.5	93	2.3	71.3	33.8	52	.6	5.9	1.2	79	
OCT	2.663	.083			83.0				100.0				3.4			
NOV	1.903	.063			64.5				70.0				2.9			
DEC	1.370	.047			85.0				60.0				21.0			
TOTAL	22.387							4.8				2.0				
AVERAGE		.061	MAXIMUM		116.0	11.2	90		115.6	30.0	74		6.7	1.7	73	
NO. OF SAMPLES					31	9			31	9			31	9		

Waste Stabilization Pond

PROJECT : BURKS FALLS

Cell Acreage : 9.5 + 9.5

Total Acreage : 19

Commenced Operation : 1974

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

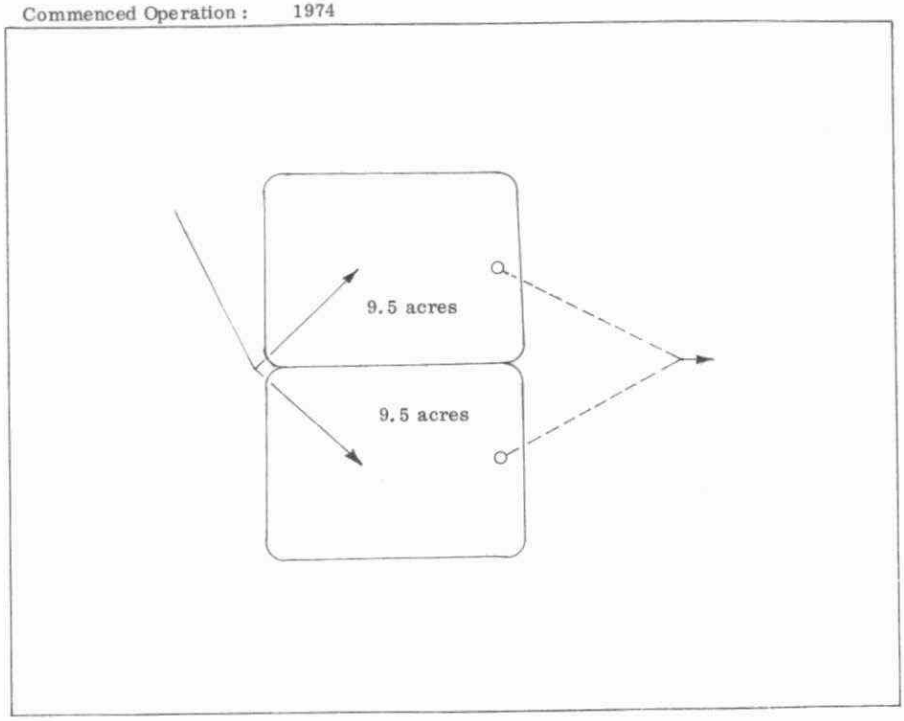
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 415 I gpm
Pump 2 : 415 I gpm

Total Cap : 415 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001426 BURKS FALLS LAGOON

MUNICIPALITY : BURKS FALLS
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 841

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.190 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.335	.043	.044													
FEB	1.069	.038	.043		95.0				100.0				8.0			
MAR	1.297	.042	.054													
APR	1.720	.057	.087													
MAY	1.834	.059	.095		74.0	10.0	86	1.1	90.0	20.0	77	1.2	5.9	1.0	83	
JUN	1.453	.048	.572													
JUL	1.354	.044	.049													
AUG	1.437	.046	.050													
SEP	1.400	.047	.052													
OCT	1.717	.055	.056		78.0				85.0				5.8			
NOV	1.849	.062	.066													
DEC	1.331	.043	.044													
TOTAL	17.796							1.1				1.2				
AVERAGE		.049	MAXIMUM .572		82.3	10.0	87		91.6	20.0	78		6.5	1.0	84	
NO. OF SAMPLES					7	3			7	3			7	3		

Waste Stabilization Pond

PROJECT : CALDWELL TWP (Verner)

Cell Acreage : 7.0 + 7.0

Total Acreage : 14

Commenced Operation : 1975

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

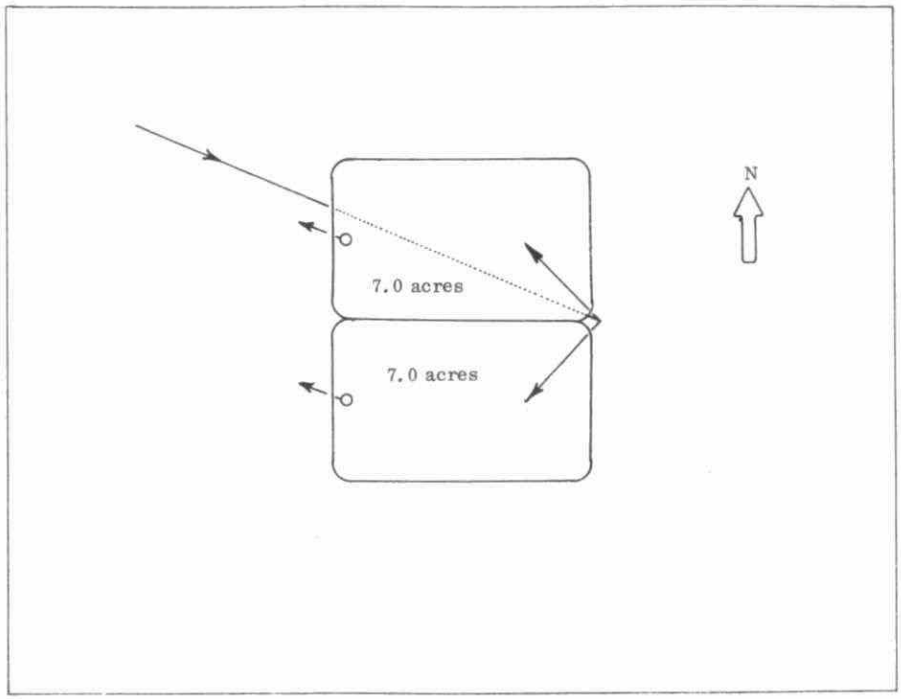
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 492 I gpm
Pump 2 :

Total Cap : 492 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001872 VERNER LAGOON

MUNICIPALITY : CALDWELL VERNER
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,804

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.140 MIGD DESIGN BOD5 : MG/L DESIGN SUSP SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY *	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	3.010	.097	.208		89.0	46.0	48	1.2	89.0	40.0	55	1.4	6.7	3.8	43	
FEB	2.376	.085	.161		165.0	46.0	72	2.8	163.0	18.0	88	3.4	7.8	2.5	67	.1
MAR	2.731	.088	.124		120.0				175.0				7.4			
APR	7.668	.255	.536		80.0				215.0				7.0			
MAY	4.731	.153	.251		40.0	19.0	52	.9	63.0	89.0	-	-	2.3	4.2	-	-
JUN	3.539	.118	.214		160.0	18.0	88	5.0	130.0	115.0	11	.5	7.7	1.4	81	.2
JUL	3.174	.102	.194		*				*				*			
AUG	4.154	.134	.165		*				*				*			
SEP	4.800	.160	.312		*				*				*			
OCT	5.620	.181	.435		50.0	1.2	97	2.7	115.0	5.0	95	6.1	3.5	1.2	65	.1
NOV	*	*			*				*				*			*
DEC	*	*			*				*				*			
TOTAL	41.803							12.6				11.4				.4
AVERAGE		.137	MAXIMUM .536		100.5	26.0	74		135.7	53.4	60		6.0	2.6	56	
NO. OF SAMPLES					11	5			11	5			11	5		

Waste Stabilization Pond

PROJECT : ENGLEHART

Cell Acreage : 10 + 10

Total Acreage : 20

Commenced Operation : -

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- ■ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

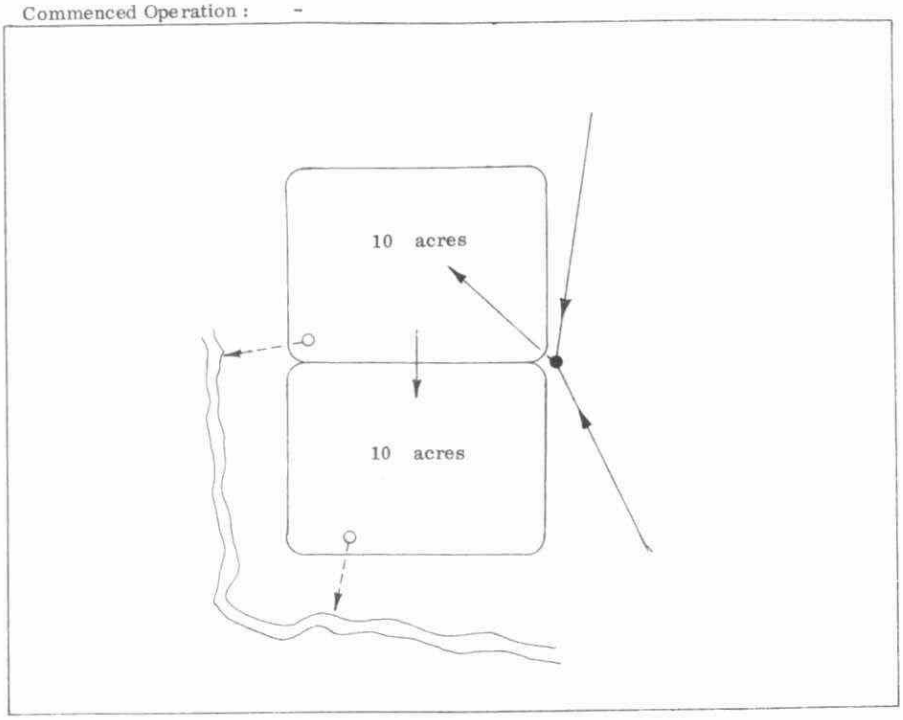
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 350 I gpm
Pump 2 : 350 I gpm

Total Cap : 350 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000187 ENGLEHART LAGOON

MUNICIPALITY : ENGLEHART
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION 1,689

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				---><--- SUSPENDED SOLIDS ---><---				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	7.085	.229			95.0	28.0	70	4.7	118.0	12.0	89	7.5	6.8			
FEB	4.574	.163			117.0	46.0	60	3.2	150.0	12.0	92	6.3	7.7	4.5	41	.1
MAR	5.910	.191			56.0	46.0	17	.5	70.0	22.0	68	2.8	3.9	4.8	-	-
APR	11.481	.383			46.0	33.0	28	1.4	40.0	23.0	42	1.9	4.2	5.0	-	-
MAY	12.619	.409			37.0	29.0	21	1.0	45.0	50.0	-	-	2.3	3.5	-	-
JUN	11.187	.373			53.0	17.0	67	4.0	100.0	30.0	70	7.8	4.5	2.1	53	.2
JUL	9.039	.292			53.3	15.3	71	3.4	60.0	13.7	77	4.1	2.9	1.6	44	.1
AUG	12.107	.391			11.0	12.0	-	-	15.0	20.0	-	-	1.1	3.4	-	-
SEP	8.042	.268			21.5	4.8	77	1.3	37.5	18.5	50	1.5	1.9	1.6	15	
OCT	9.778	.315			70.0	5.0	92	6.3	110.0	5.0	95	10.2	4.7	2.4	48	.2
NOV	9.361	.312			140.0	3.0	97	12.8		9.0			8.1	2.8	65	.4
DEC	6.870	.222			105.0	8.3	92	6.6	157.5	10.5	93	10.0	6.0	3.2	46	.1
TOTAL	108.053							45.2				52.1				1.1
AVERAGE		.296	MAXIMUM		67.0	20.6	69		82.0	18.8	77		4.5	3.1	29	
NO. OF SAMPLES					22	22			21	22			22	18		

Waste Stabilization Pond

PROJECT : FAUQUIER TWP.
(MOONBEAM)

Cell Acreage : 6.0

Total Acreage : 6.0

Commenced Operation : 1961

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

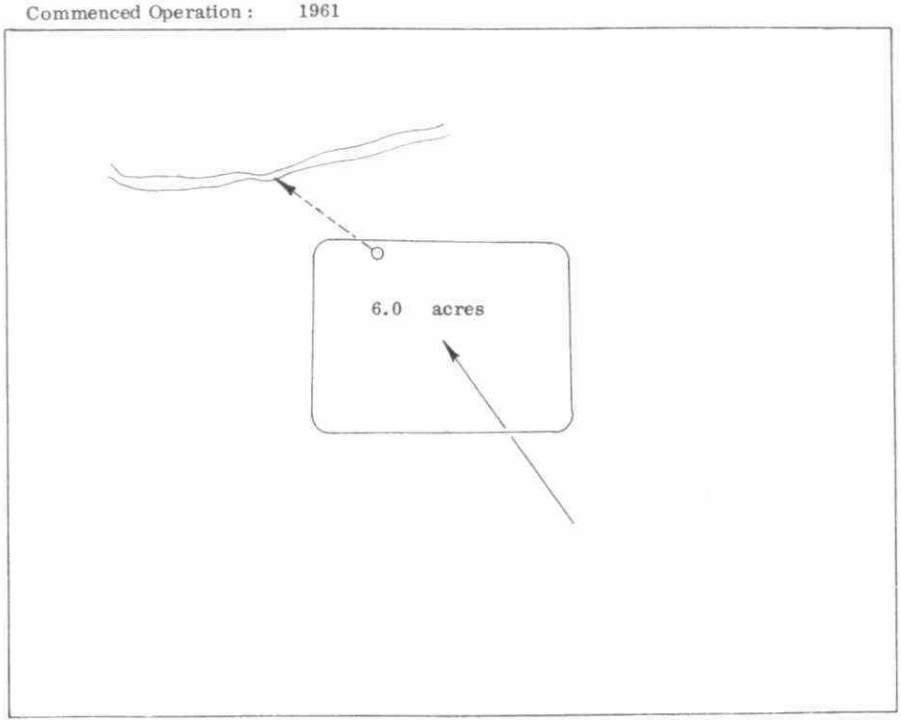
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 338 I gpm
Pump 2 : 338 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000230 MOONBEAM LAGOON

MUNICIPALITY : FOUQUIER MOONBEAM
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 1,403

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.060 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	FFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.501	.048	.101		290.0	36.0	87	3.8	468.0	27.0	94	6.6	11.0	4.9	55	
FEB	3.224	.115	.122		79.0	42.0	46	1.1	93.0	30.0	67	2.0	7.6	5.4	28	
MAR	1.784	.058	.147		183.0	64.0	65	2.1	150.0	21.0	86	2.3	10.2	5.4	47	
APR	3.540	.120	.180		55.0	38.0	30	.6	119.0	26.0	78	3.2	10.0	6.0	40	.1
MAY	2.555	.082	.101		66.0				78.0				6.5	7.5	-	-
JUN	8.112	.270	.810		34.0				135.0				3.0			
JUL	2.514	.081	.162		200.0				105.0				6.0			
AUG	1.886	.061	.121		200.0				105.0				6.0			
SEP	2.030	.067	.121		200.0	28.0	86	3.4	105.0	30.0	71	1.5	6.0	6.0		
OCT	3.800	.122	.304		104.0	24.0	76	3.0	145.0	35.0	75	4.1	12.1	4.6	61	.2
NOV	3.657	.122	.186		85.0				165.0				5.3			
DEC	2.876	.093	.108		185.0				185.0				9.3			
TOTAL	37.479							14.0				19.7				.3
AVERAGE		.103	MAXIMUM .810		140.0	38.6	72		154.4	28.1	81		7.7	5.6	26	
NO. OF SAMPLES					19	12			19	12			19	13		

Waste Stabilization Pond

PROJECT : HAILEYBURY
(NORTH COBALT)

Cell Acreage : 10

Total Acreage : 10

Commenced Operation: N/A

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

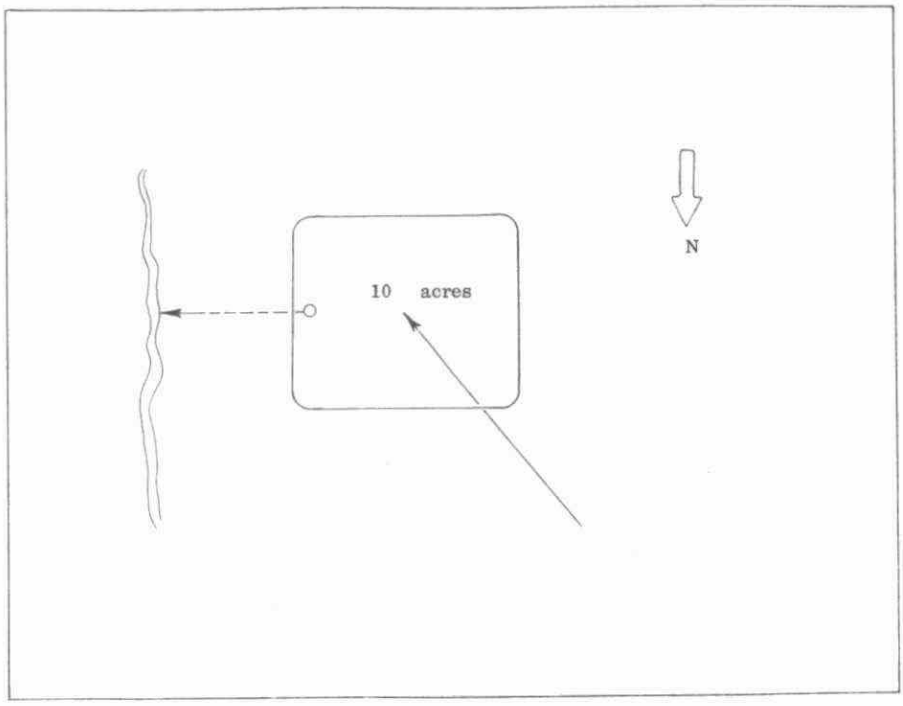
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 231 I gpm
Pump 2 : 225 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001382 NORTH COBALT LAGOON
MUNICIPALITY : HAILEBURY
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL
CURRENT POPULATION : 4,997

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.100 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT		REDUCTION		INFLUENT	EFFLUENT		REDUCTION		INFLUENT	EFFLUENT		REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS		MG/L	MG/L	%	10(3) LBS		MG/L	MG/L	%	10(3) LBS	
JAN/78-DEC/78																			
JAN	1.604	.052	.065		118.0					115.0					4.9				
FEB	1.340	.048	.129		72.0					62.0					7.3				
MAR	1.329	.043	.048		120.0					105.0					9.5				
APR	4.554	.152	.271		50.0					70.0									
MAY	3.034	.098	.193		73.0	20.6	71	1.5		123.0	34.0	72	2.7		7.7	2.8	63	.1	
JUN	1.816	.061	.091		105.0					108.0					7.1				
JUL	1.581	.051	.131		72.5					62.5					10.5				
AUG	1.383	.045	.110		97.5					115.0					5.9				
SEP	1.894	.063			110.0					165.0					11.0				
OCT	2.643	.085			120.0	2.9	97	3.0		95.0	5.0	94	2.3		6.0	1.3	78	.1	
NOV	1.610	.054			105.0					182.5									
DEC	1.386	.045			80.0					115.0					5.1				
TOTAL	24.174							4.5					5.0					.2	
AVERAGE		.066	MAXIMUM .271		93.5	11.7	87	.		109.8	19.5	82			7.5	2.0	72		
NO. OF SAMPLES					15	3				16	3				13	3			

Waste Stabilization Pond

PROJECT : HEARST

Cell Acreage : 15.5 + 15.5 + 15.5 + 15.5 (Note: Est. 50 Acres Usable due to rock outcropping)

Total Acreage : 50 (Usable Equivalent)

Commenced Operation : July 1973

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- ■ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

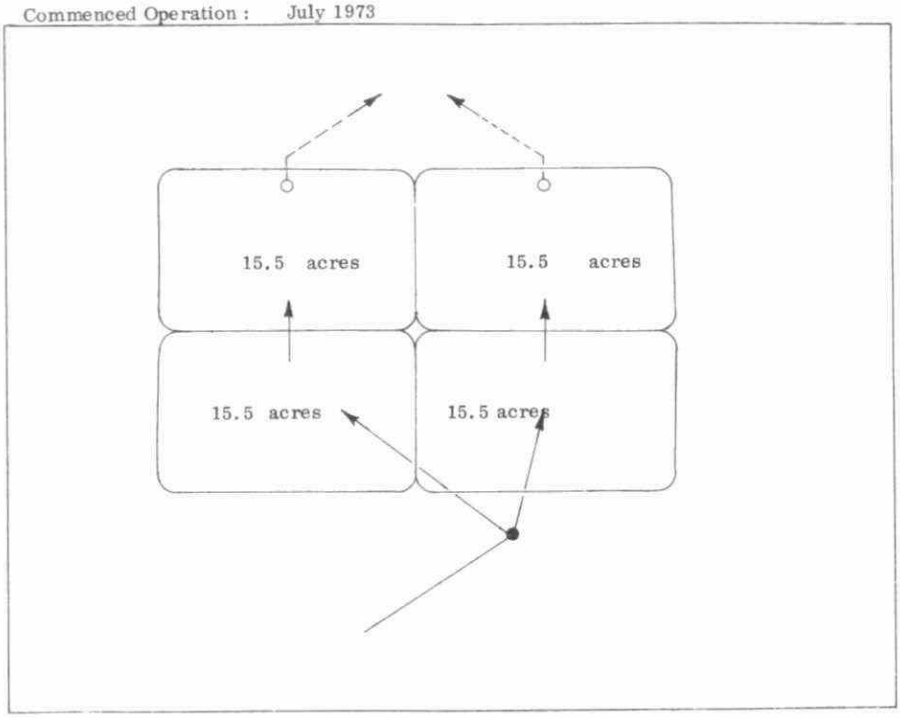
Flow Measurement :

- ■ Flow Meter
- ■ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 1400 I gpm
Pump 2 : 1400 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000338 HEARST LAGOON

MUNICIPALITY : HEARST
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 5,212

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.500 MIGD DESIGN BODS : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	15.857	.512	.682		140.0	70.0	50	11.1	115.0	85.0	26	4.7	7.5	4.0	46	.5
FEB	18.870	.674	.796		*	*			*	*			*	*		
MAR	18.437	.597	1.199		90.0	16.0	82	13.6	65.0	38.0	41	4.9	7.1	5.0	29	.3
APR	28.621	.954	2.052		100.0	*			64.0	*			4.8	*		
MAY	35.260	1.137	2.445		109.0	36.0	66	25.7	124.0	26.0	79	34.5	3.9	2.8	28	.3
JUN	27.940	.931	1.854		155.0	6.0	96	41.6	115.0	20.0	82	26.5	6.1	1.7	72	1.2
JUL	24.211	.781	1.119		85.0	11.0	87	17.9	55.0	93.0	-	-	3.7	2.7	27	.2
AUG	20.615	.665	.999		*	14.0			*	40.0			*	9.3		
SEP	21.000	.677	1.112		*	31.5			*	47.4			*	2.9		
OCT	25.200	.812	2.000		110.0	43.0	60	16.8	71.6	20.4	71	12.9	5.0	3.6	28	.3
NOV	18.600	.620	.895		*	*			*	*			*	*		
DEC	18.900	.612	.969		*	*			*	*			*	*		
TOTAL	273.511							126.7				83.5				2.8
AVERAGE		.748	MAXIMUM 2.445		112.7	28.4	74		87.0	46.2	46		5.4	4.0	26	
NO. OF SAMPLES					17	38			17	38			17	39		

Waste Stabilization Pond

PROJECT : LITTLE CURRENT

Cell Acreage : 10

Total Acreage : 10

Commenced Operation: Jan, 1965

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

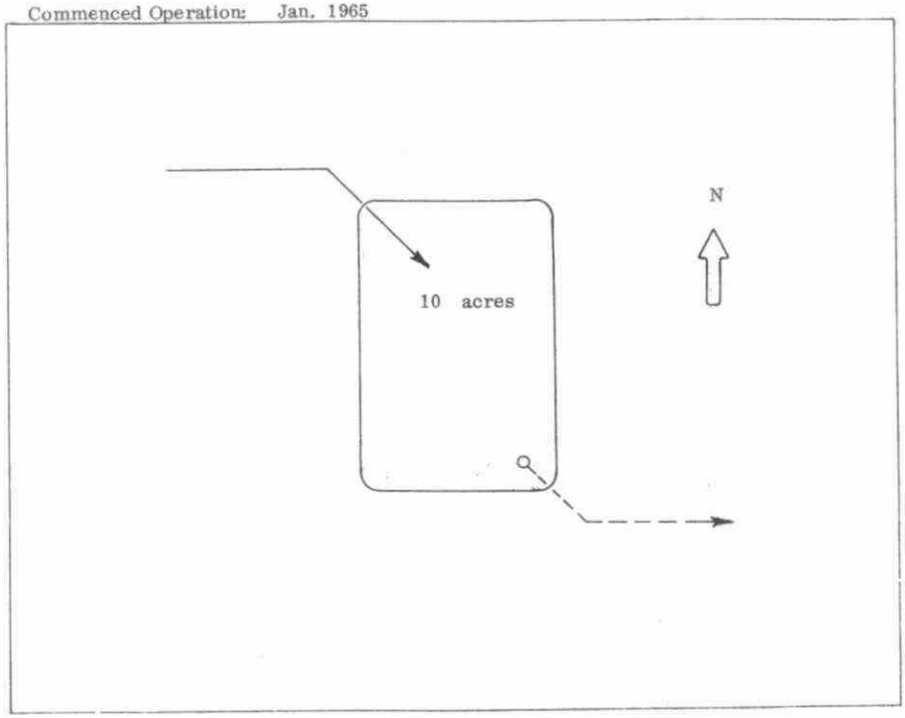
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 434 I gpm
Pump 2 : 434 I gpm

Total Cap : 434 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000392 LITTLE CURRENT LAGOON

MUNICIPALITY : LITTLE CURRENT
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON

CURRENT POPULATION : 1,517

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.100 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.339	.140	.244		100.0	9.0	91	3.9	120.0	21.0	82	4.2	7.8	4.6	41	.1
FEB	4.027	.144	.255													
MAR	5.515	.178	.374													
APR	6.674	.222	.403													
MAY	4.087	.132	.270		120.0	8.0	93	4.5	95.0	9.0	90	3.5	7.1	2.5	64	.1
JUN	3.466	.116	.190		90.0	7.0	92	2.8	140.0	11.0	92	4.4				
JUL	3.827	.123			15.5	12.5	19	.1	45.0	13.5	70	1.2	2.6	.7	73	
AUG	3.989	.129	.192		36.0	19.0	47	.6	30.0	15.0	50	.5	3.6	.8	77	.1
SEP	3.741	.124	.234													
OCT	4.090	.131	.273													
NOV	3.552	.118	.223		13.0				50.0				4.4			
DEC	3.791	.122	.212		95.0	12.0	87	3.1	110.0	30.0	72	3.0	9.4	3.4	63	.2
TOTAL	51.098							15.0				16.8				.5
AVERAGE		.140	MAXIMUM .403		67.0	11.2	83		84.2	16.5	80		5.8	2.4	58	
NO. OF SAMPLES					7	6			7	6			6	5		

Waste Stabilization Pond

PROJECT : MATTAWA

Cell Acreage : 4.5 + 8.5 + 5.0

Total Acreage : 18.0

Commenced Operation : 1963

Operation :

- ■ Series (# 1 & # 3 in parallel
- □ Parallel Series to #2)
- □ Other :

Discharge :

- □ Seasonal
- ■ Continuous (100% Exfiltration)
- □ Annual
- ■ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

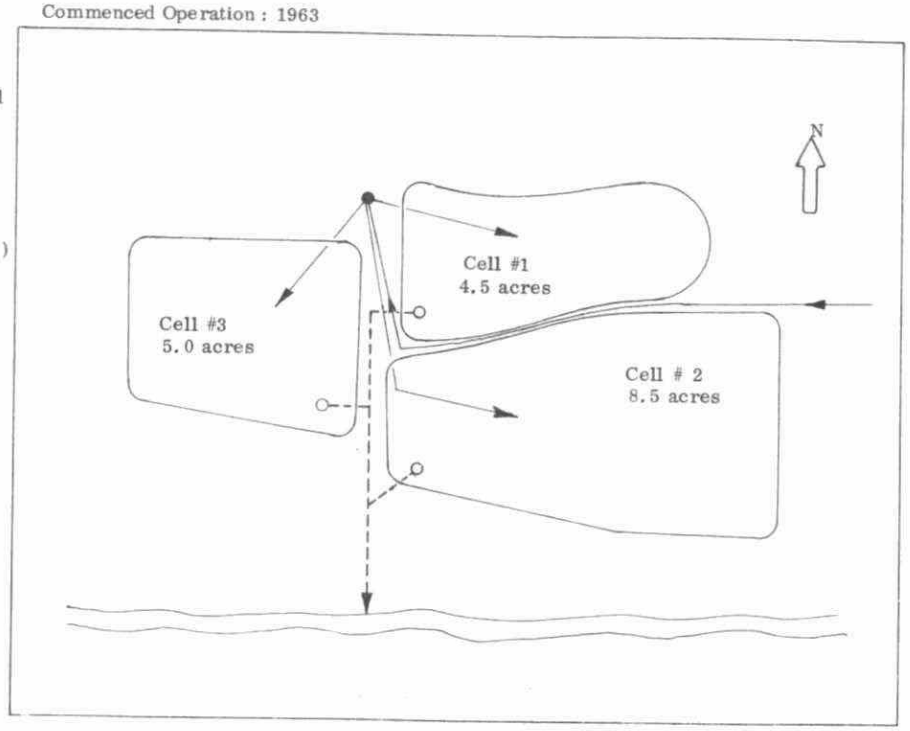
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 800 I gpm
Pump 2 : 800 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000436 MATTAWA LAGOON

MUNICIPALITY : MATTAWA
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : EXFILTRATION LAGOON
CONTINOUS DISCHARGE

CURRENT POPULATION : 2,697

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.180 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	4.140	.134	.468		23.0	36.0	-	-	30.0	18.0	40	.4	1.6	5.0	-	-
FEB	3.384	.120	.180										1.8	3.7	-	-
MAR	4.248	.137	.180		29.0	48.0	-	-	20.0	21.0	-	-	1.1	3.6	-	-
APR	4.820	.161	.216		10.0	10.0			20.0	12.0	40	.3	.8	2.6	-	-
MAY	3.888	.125	.180		19.0	10.0	47	.3	23.0	8.0	65	.5		1.6		
JUN	3.204	.107	.216		36.0	18.0	50	.5	25.0	25.0			1.8	3.1	-	-
JUL	3.941	.127	.648		32.0	28.0	12	.1	20.0	80.0	-	-	2.3	4.4	-	-
AUG	3.672	.118	.324		102.5	19.0	81	3.0	77.5	67.5	12	.3	4.6	3.4	26	
SEP	3.708	.123	.432		34.0	24.0	29	.3	35.0	25.0	28	.3	2.5	4.0	-	-
OCT	4.320	.139	.216		22.0	8.0	63	.6	35.0	3.0	91	1.3	2.5	1.6	36	
NOV	4.392	.146	.216		30.0	26.0	13	.1	60.0	70.0	-	-	1.9	2.9	-	-
DEC	3.816	.123	.180		18.0	12.0	33	.2	40.0	20.0	50	.7	1.6	3.5	-	-
TOTAL	47.533							5.1				3.8				
AVERAGE		.130	MAXIMUM .648		32.3	21.7	32		35.0	31.7	9		2.0	3.2	-	
NO. OF SAMPLES					17	17			17	17			17	18		

Waste Stabilization Pond

PROJECT : MICHIPICOTEN TWP
(WAWA)

Cell Acreage : 20 + 20

Total Acreage : 40

Commenced Operation : September 1963

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

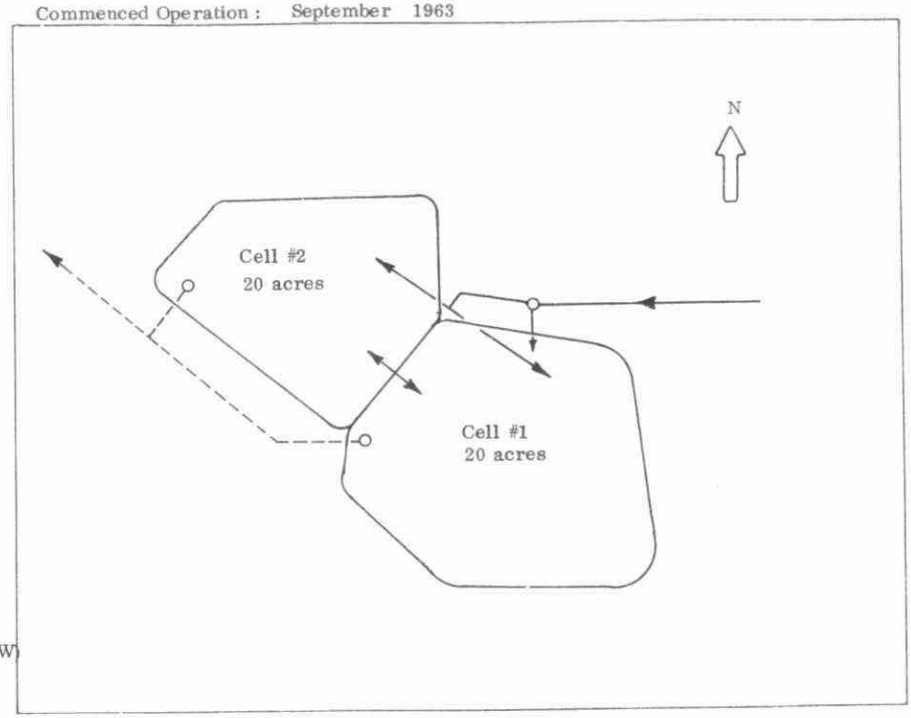
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 : (GRAVITY FLOW)

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000454 WAWA LAGOON

MUNICIPALITY : MICHIPICOTEN WAWA
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON

CURRENT POPULATION : 4,595

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.400 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	19.481	.630	1.120													
FEB	23.885	.770														
MAR	23.885	.770	.803													
APR	21.391	.713	.864		50.0	16.0	68	7.2	70.0	10.0	85	12.8	3.0			
MAY	18.104	.584	.655		13.0	6.0	53	1.2	10.0	3.0	70	1.2	2.0			
JUN	18.000	.600			62.0	1.6	97	10.8	35.0	10.0	71	4.5	3.9			
JUL	18.000	.580			65.0	7.6	88	10.3	90.0	30.0	66	10.8	4.0			
AUG	18.000	.580			44.0	9.0	79	6.3	30.0	25.0	16	.9	3.2			
SEP	18.000	.600														
OCT	18.000	.580			46.0	3.0	93	7.7	140.0	2.0	98	24.8	4.0			
NOV	13.350	.445	.520		60.0	3.0	95	7.6	60.0	10.0	83	6.6				
DEC	15.889	.512	.603													
TOTAL	225.985							51.1				61.6				
AVERAGE		.614	MAXIMUM 1.120		48.5	6.6	86		62.1	12.8	79		3.3			
NO. OF SAMPLES					7	7			7	7			6			

Waste Stabilization Pond

PROJECT : NEW LISKEARD

Cell Acreage : 10.1 + 10.0 (6 New Liskeard + 4 Dymond Twp) + 10.1 + 12.8 + 20.7

Total Acreage : 63.7 (New Liskeard)

Commenced Operation : 1964
Expansion to 63.7 Acres : August 1973

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- □ Continuous
- □ Annual
- ■ Other : Continuous with Spring drawdown

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

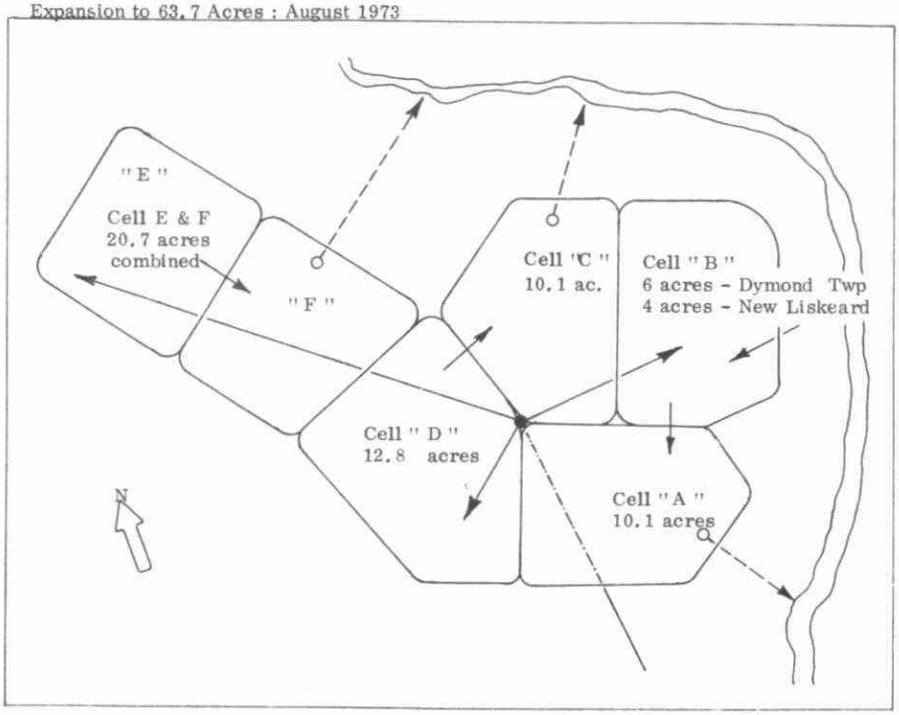
Flow Measurement :

- □ Flow Meter
- □ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 1280 I gpm
Pump 2 : 1160 I gpm

Total Cap : 1630 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000515 NEW LISKEARD LAGOON

MUNICIPALITY : NEW LISKEARD
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 5,496

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.637 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><- BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
							REDUCTION				REDUCTION				REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	19.354	.624	.844		265.0	65.0	75	38.7	343.0	8.0	97	64.8	16.7	6.6	60	1.9
FEB	17.971	.641	.768		*	*			*	*			*	*		
MAR	22.686	.732	1.075		*	*			*	*			*	*		
APR	47.847	1.595	2.694		54.7	24.3	55	14.5	90.6	19.0	79	34.2	4.1	4.1		
MAY	33.881	1.210	1.459		130.9	17.6	86	38.3	194.0	20.1	89	58.9	6.2	3.7	40	.8
JUN	36.996	1.233			114.9	23.5	79	33.8	115.4	30.8	73	31.2	4.2	3.3	21	.3
JUL	28.407	.916	1.510		125.5	25.3	79	28.4	144.6	33.3	76	31.6	4.5	3.7	17	.2
AUG	27.615	.891	1.382		*	*			*	*			*	*		
SEP	21.693	.748	1.155		122.0	13.2	89	23.6	188.7	40.3	78	32.1	5.6	7.2	-	-
OCT	31.762	1.025	2.045		164.0	6.2	96	50.1	174.5	24.8	85	47.5	6.7	3.6	46	.9
NOV	23.646	.788	1.117		188.0	2.2	98	43.9	182.0	8.0	95	41.1	6.2	3.4	44	.6
DEC	23.664	.763	1.532		*	*			*	*			*	*		
TOTAL	335.522							271.3				341.4				4.7
AVERAGE		.931	MAXIMUM 2.694		145.6	22.1	84		179.1	23.0	87		6.7	4.4	34	
NO. OF SAMPLES					14	15			14	15			14	15		

Waste Stabilization Pond

PROJECT : NORTH HIMSWORTH (CALLANDER)

Cell Acreage : 14.5

Total Acreage : 14.5

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other : One Cell

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

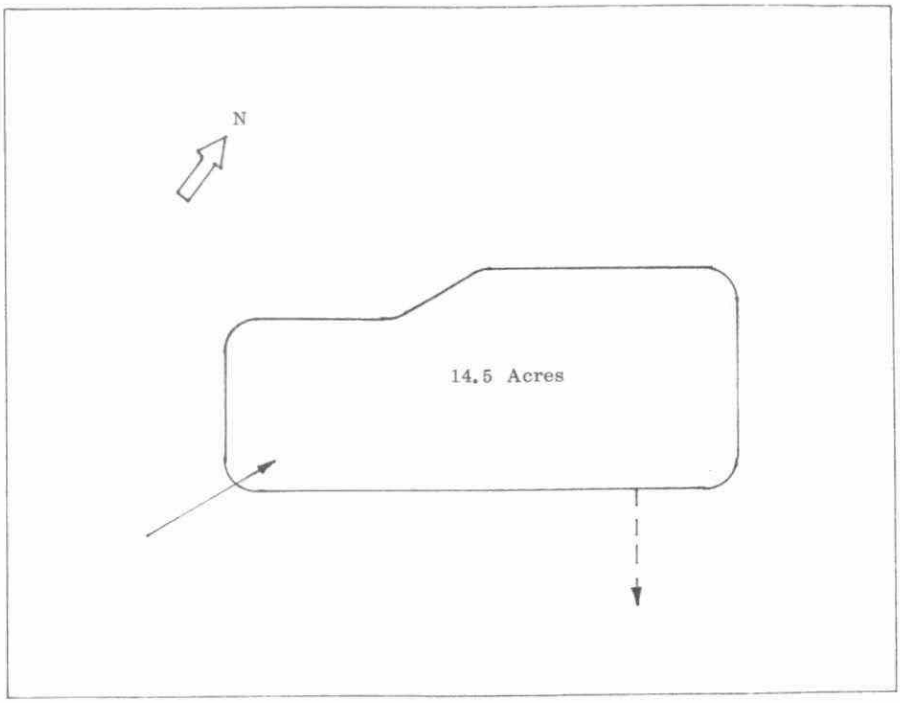
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 609 Igpm
Pump 2 : 609 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001747 CALLANDER LAGOON

MUNICIPALITY : NORTH HIMSWORTH
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 2,314
POPULATION ...
P

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.105 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.138	.069			115.0				105.0				7.0			
FEB	1.619	.058			120.0				103.0				5.7			
MAR	2.004	.064			235.0				229.0				6.2			
APR	3.999	.133			90.0				97.0				5.5			
MAY	2.870	.093			113.0	3.7	96	3.1	120.0	21.9	81	2.8	7.6	1.8	76	.1
JUN	2.447	.082	.090		80.0				90.0				5.9			
JUL	2.191	.071	.088		125.0				140.0				6.4			
AUG	2.463	.079	.109		120.0				108.0				6.5			
SEP	3.171	.106	.128		85.0				90.0				4.2			
OCT	3.531	.114			80.0				93.0				5.2			
NOV	2.861	.095	.168		115.0	14.8	87	2.8	95.0	22.5	76	2.0	6.0	.6	89	.1
DEC	2.602	.084	1.109		140.0				140.0				6.8			
TOTAL	31.896							5.9				4.8				.2
AVERAGE		.087	MAXIMUM 1.109		118.1	9.2	92		117.5	22.2	81		6.0	1.2	80	
NO. OF SAMPLES					22	16			22	16			22	14		

Waste Stabilization Pond

PROJECT : POWASSAN

Cell Acreage : 7

Total Acreage : 7

Commenced Operation : 1962

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ■ Batch
- ☐ Continuous
- ☐ None

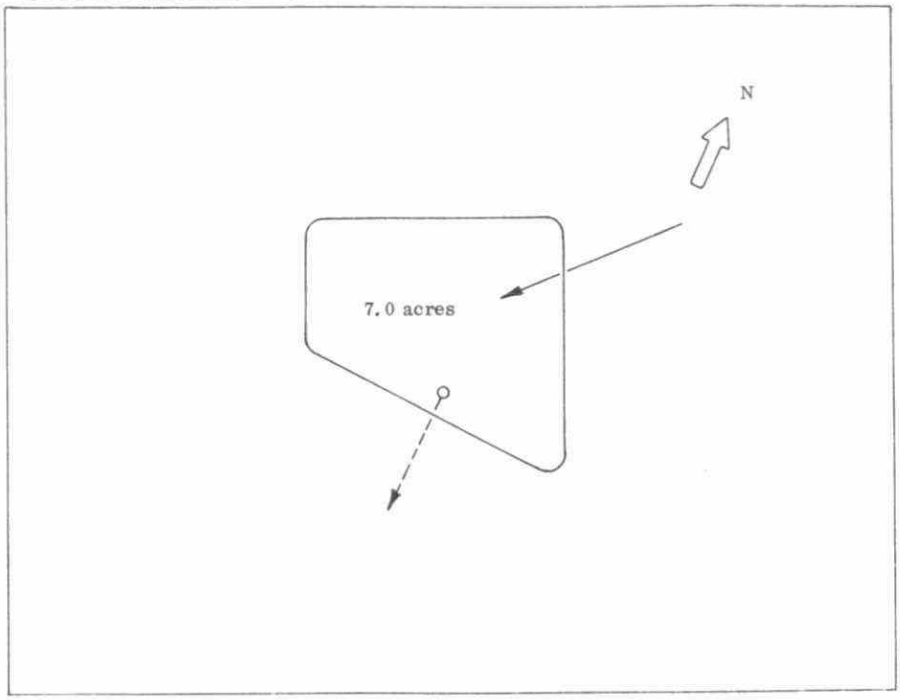
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 240 I gpm
Pump 2 : 240 I gpm

Total Cap : N/A



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000613 POWASSAN LAGOON

MUNICIPALITY : POWASSAN
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,215

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.070 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA --->				<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	2.442	.079	.104		*	*			*	*			*	*		
FEB	3.118	.111	.144		*	*			*	*			*	*		
MAR	3.034	.098	.202		110.0	44.0	60	2.0	90.0	30.0	66	1.8	5.9	3.8	35	
APR	7.915	.264	.507		68.0	30.0	55	3.0	283.0	29.0	89	20.1	4.4	3.2	26	
MAY	4.864	.157	.159		55.0	9.0	83	2.2	78.0	20.0	74	2.8	5.7	1.9	66	.1
JUN	3.342	.111	.576		130.0	20.0	84	3.6	100.0	50.0	50	1.6	8.4	2.6	69	.1
JUL	5.087	.164	.310		*	*			*	*			*	*		
AUG	4.124	.133	.202		*	*			*	*			*	*		
SEP	4.699	.157	.224		*	*			*	*			*	*		
OCT	5.410	.174	.504		140.0	*			220.0	*			9.5	*		
NOV	3.315	.110	.343		135.0	*			218.0	*			6.8	*		
DEC	2.214	.071	.138		*	*			*	*			*	*		
TOTAL	49.564							10.8				26.3				.2
AVERAGE		.136	MAXIMUM .576		106.3	25.7	75		164.8	32.2	80		6.7	2.8	57	
NO. OF SAMPLES					7	4			7	4			7	4		

Waste Stabilization Pond

PROJECT : (Warren)
Ratter and Dunnet

Cell Acreage : 10 + 10

Total Acreage : 20 acres

Operation :

- ■ Series
- ■ Parallel
- □ Other :

Discharge :

- □ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

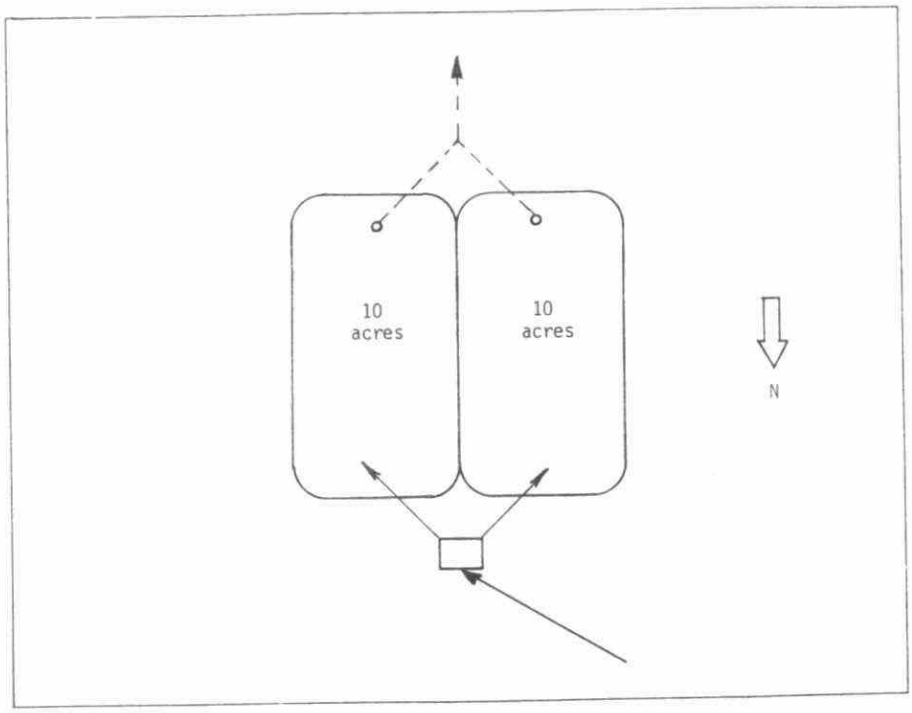
Flow Measurement :

- □ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 450 I gpm
Pump 2 : 450 I gpm

Total Cap : 450 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001916 WARREN LAGOON

MUNICIPALITY : RATTER DUNNET WARREN
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL PHOSPHORUS REMOVAL

CURRENT POPULATION : 1,595

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.133 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.237	.039	.050		46.0				55.0				2.8			
FEB	1.125	.040	.046		150.0				125.0				6.8			
MAR	1.295	.042	.057													
APR	2.469	.082	.123		85.0				192.0				3.3			
MAY	1.976	.064	.989		170.0	4.0	97	3.2	218.0	21.0	90	3.8	9.0	.5	94	.1
JUN	1.527	.051	.053		180.0				195.0				9.1			
JUL	1.024	.033	.914													
AUG	1.369	.044	.057		340.0				415.0				7.7			
SEP	1.613	.054	.073		120.0				135.0				4.7			
OCT	2.221	.072	.105		90.0				150.0				3.8			
NOV	1.584	.053	.057													
DEC	1.572	.051	.077		160.0				110.0				5.7			
TOTAL	19.012							3.2				3.8				.1
AVERAGE		.052	MAXIMUM .989		149.0	4.0	97		177.2	21.0	88		5.8	.5	9	
NO. OF SAMPLES					13	2			13	2			13	2		

Waste Stabilization Pond

PROJECT : SHACKLETON - MACHIN TWP (FAUQUIER)

Cell Acreage : 10.0

Total Acreage : 10.0

Commenced Operation : Nov. 1974

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

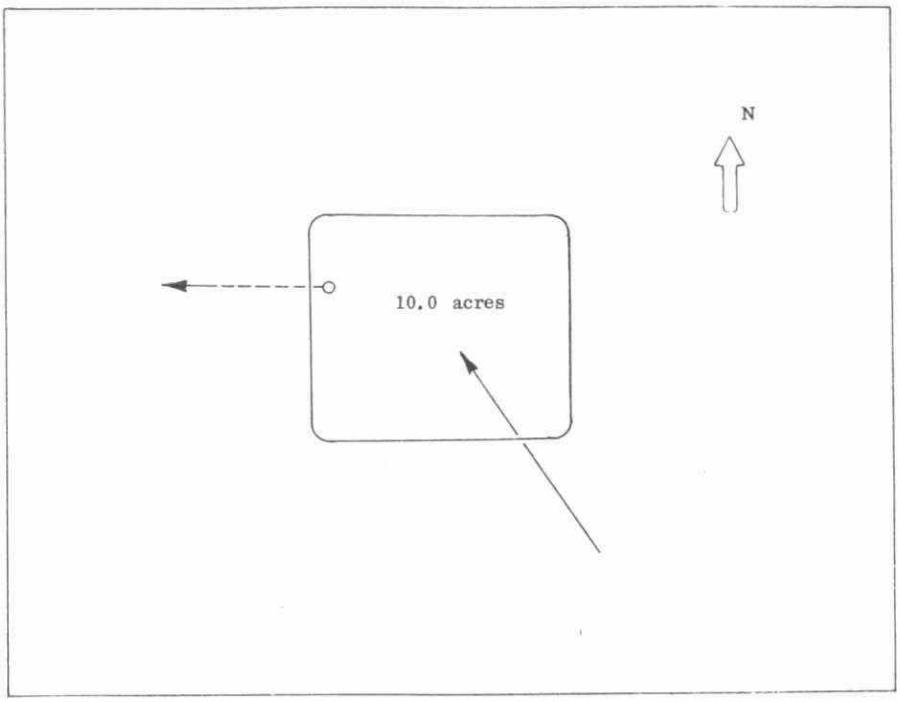
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 250 I gpm
Pump 2 : 250 I gpm

Total Cap : 250 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001792 FAUQUIER LAGOON

MUNICIPALITY : SHACKLETON AND MACHIN
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL

CURRENT POPULATION : 914

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.080 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	1.080	.034	.074		80.0	13.0	83	.7	95.0	10.0	89	.9	5.2	.7	86	
FEB	1.170	.042			55.0	18.0	67	.4	78.0	21.0	73	.6	6.8	1.7	75	
MAR	1.320	.042	.148		302.0	43.0	85	3.4	232.0	26.0	88	2.7	10.3	4.9	52	
APR	1.393	.046	.098		225.0	44.0	80	2.5	150.0	30.0	80	1.6	7.6	4.8	36	
MAY	1.342	.042	.098		*	13.9			*	20.0			*	.8		
JUN	2.145	.072	.098		60.0				60.0				3.3			
JUL	2.411	.078	.098		*				*				*			
AUG	1.672	.054	.076		24.0				140.0				2.1			
SEP	1.697	.055	.123		48.5				180.0				3.7			
OCT	2.318	.075	.150		86.5	7.0	91	1.8	269.0	6.0	97	6.0	6.5	.6	89	.1
NOV	1.377	.045	.073		94.0				148.0				7.4			
DEC	1.300	.042	.123		100.0				165.0				6.1			
TOTAL	19.225							8.8				11.8				.1
AVERAGE		.052	MAXIMUM .150		107.5	23.1	78		151.7	18.8	87		5.9	2.2	61	
NO. OF SAMPLES					15	16			15	16			15	16		

Waste Stabilization Pond

PROJECT : SUNDRIDGE

Cell Acreage : 10.0 + 10.0

Total Acreage : 20.0

Commenced Operation; Jan 1978

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ☒ Seasonal (¶ 80 day retention)
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☒ Batch
- ☐ Continuous
- ☐ None

Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001961 SUNRIDGE LAGOON

MUNICIPALITY : SUNDRIDGE
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON
PHOSPHORUS REMOVAL

CURRENT POPULATION : 702

COMMENT: LAGOON CONSTRUCTION COMPLETED IN FALL 1978

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.144 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.274	.041	.054													
FEB	1.309	.047	.058													
MAR	1.556	.050	.065													
APR	1.850	.062	.115													
MAY	2.280	.074	.221													
JUN	1.854	.062	.078													
JUL	1.927	.062	.077		45.0				45.0				2.8			
AUG	1.564	.050			26.0				40.0				2.2			
SEP	1.769	.059	.078													
OCT	1.975	.064	.076		78.0	4.0	94	1.4	78.0	33.0	57	.8	3.6	.9	75	
NOV	1.672	.056	.069													
DEC	1.648	.053	.065													
TOTAL	20.678							1.4				.8				
AVERAGE		.057	MAXIMUM .221		49.6	4.0	91		54.3	33.0	39		2.8	.9	68	
NO. OF SAMPLES					4	5			4	4			4	5		

Waste Stabilization Pond

PROJECT : WEBBWOOD

Cell Acreage : 10 Acres

Total Acreage : 10 Acres

Operation :

- ☐ Series
- ☐ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ☐ None

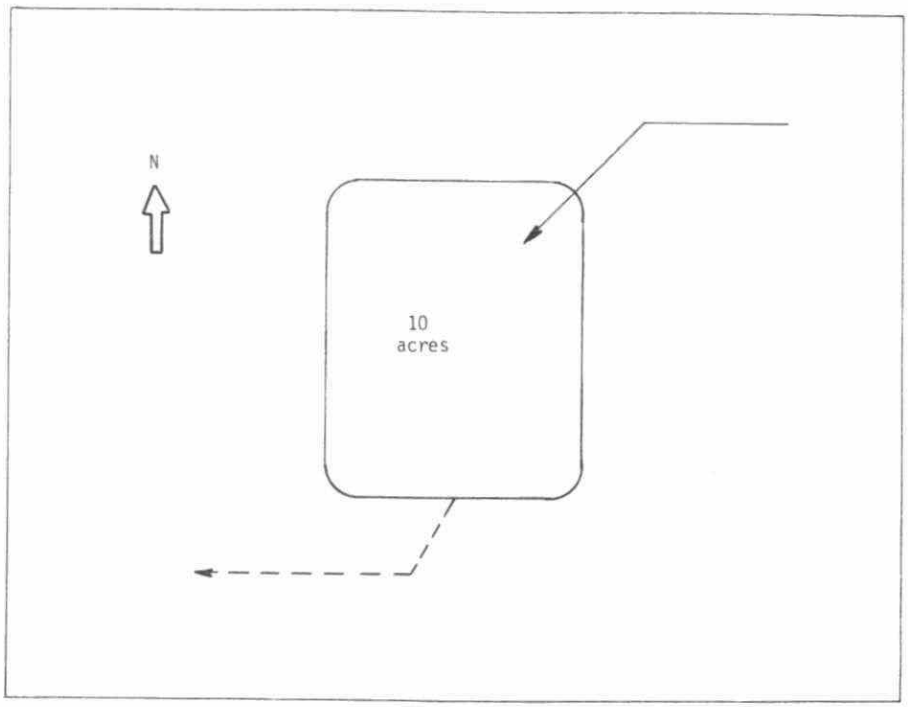
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 200 I gpm
Pump 2 : 200 I gpm

Total Cap : 200 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001881 WEBBWOOD LAGOON

MUNICIPALITY : WEBBWOOD
REGION : 05 NORTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON

CURRENT POPULATION : 511

COMMENT: NO DISCHARGE IN 1978
LAGOON CONSTRUCTION COMPLETED LATE FALL 1975

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.100 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
					INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS	MG/L	MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	.504	.016	.024		300.0				255.0				13.0			
FEB	.422	.015	.019		310.0				640.0				17.0			
MAR	.458	.015	.027		121.0				168.0				6.1			
APR	.583	.019	.029		75.0				53.0				5.5			
MAY	.719	.023	.046		139.0				129.5				12.0			
JUN	.441	.015	.020		85.0				30.0				6.7			
JUL	.428	.014	.018		250.0				120.0				17.0			
AUG	.443	.014	.021		150.0				65.0				9.3			
SEP	.443	.015	.020		160.0				60.0				8.8			
OCT	.493	.016	.020		130.0				105.0				12.0			
NOV	.426	.014	.021		130.0				60.0				8.9			
DEC	.413	.013	.016		360.0				365.0				19.0			
TOTAL	5.773															
AVERAGE		.016	MAXIMUM .046		184.1				170.8				11.2			
NO. OF SAMPLES					14				14				14			

Ministry of the Environment
Ontario

Northwestern Region
⑥

REGIONAL OFFICE
THUNDER BAY
435 James St. S.
P.O. Box 5000
807-475-1205

DISTRICT OFFICE
Kenora
808 Robertson St.
807-468-5578

Waste Stabilization Pond

PROJECT : EMO TWP.

Cell Acreage : 10

Total Acreage : 10

Operation :

- ☐ Series
- ☐ Parallel (Single Cell)
- ☐ Other :

Discharge :

- ■ Seasonal
- ☐ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

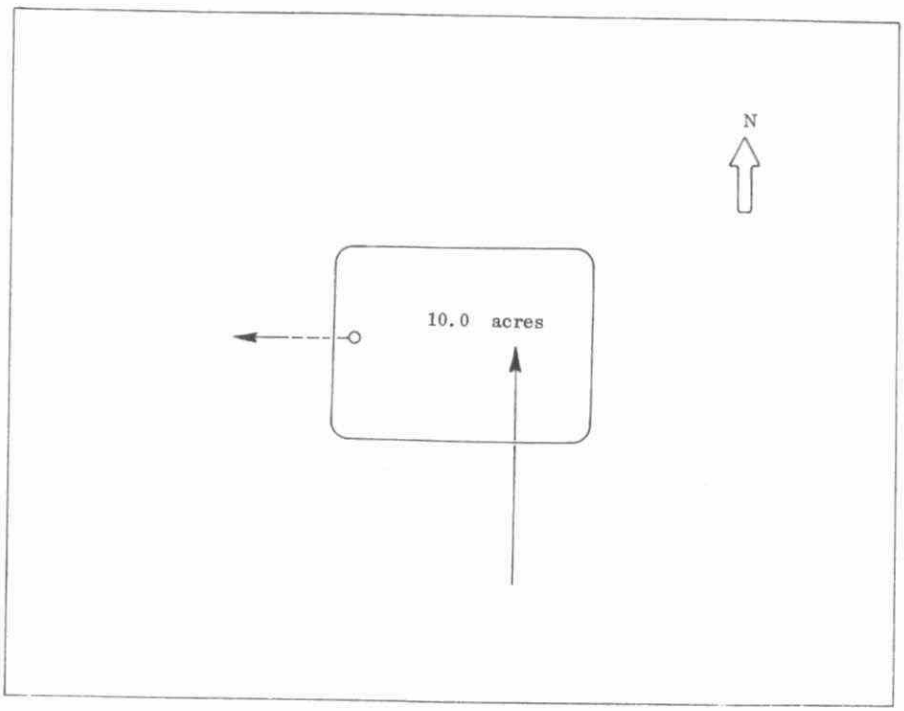
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 250 I gpm
Pump 2 : 250 I gpm

Total Cap : 400 I gpm



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001015 EMO LAGOON — MUNICIPALITY : EMO, REGION : 06 NORTHWESTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL — CURRENT POPULATION : 1,035

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.200 MIGD DESIGN BOD5 MG/L DESIGN SUSP.SOLIDS MG/L

	<--- FLOW DATA --->			<-BIOCHEMICAL OXYGEN DEMAND->				<--- SUSPENDED SOLIDS --->				<--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	1.800	.060			110.0				120.0				10.0			
FEB	1.600	.050														
MAR	1.800	.060			120.0				180.0				10.0			
APR	1.800	.060														
MAY	1.800	.058														
JUN	1.800	.060			150.0	11.4	92	2.4	150.0	70.0	53	1.4	11.0	.7	93	.1
JUL	1.600	.050			190.0				350.0				8.8			
AUG	1.500	.048			220.0				50.0				6.0			
SEP	1.500	.048			55.0				100.0				4.3			
OCT	1.500	.048			120.0				120.0				13.0			
NOV	1.816	.061			130.0	4.9	96	2.2	300.0	31.9	89	4.8	11.0	1.3	87	.1
DEC	2.041	.066			140.0				90.0				7.9			
TOTAL	20.557							4.6				6.2				.2
AVERAGE		.056	MAXIMUM		137.2	8.1	94		162.2	50.9	68		9.1	1.0	88	
NO. OF SAMPLES					9	12			9	12			9	12		

AERATED LAGOONS

Ministry of the Environment
Ontario

Southwestern Region

(1)

REGIONAL OFFICE
LONDON
985 Adelaide St. S.
519-681-3600

DISTRICT OFFICES
Windsor
250 Windsor Ave
519-254-5129

Sarnia
242A Indian Rd. S.
519-336-4030

Owen Sound
220 11th St. E.
519-371-2901

SUB-OFFICE
Chatham
435 Grand Ave W.
519-352-5107

Waste Stabilization Pond

PROJECT : DURHAM

Cell Acreage : 0.7

Total Acreage : 0.7

Commenced Operation: 1966

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : Single aerated cell

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

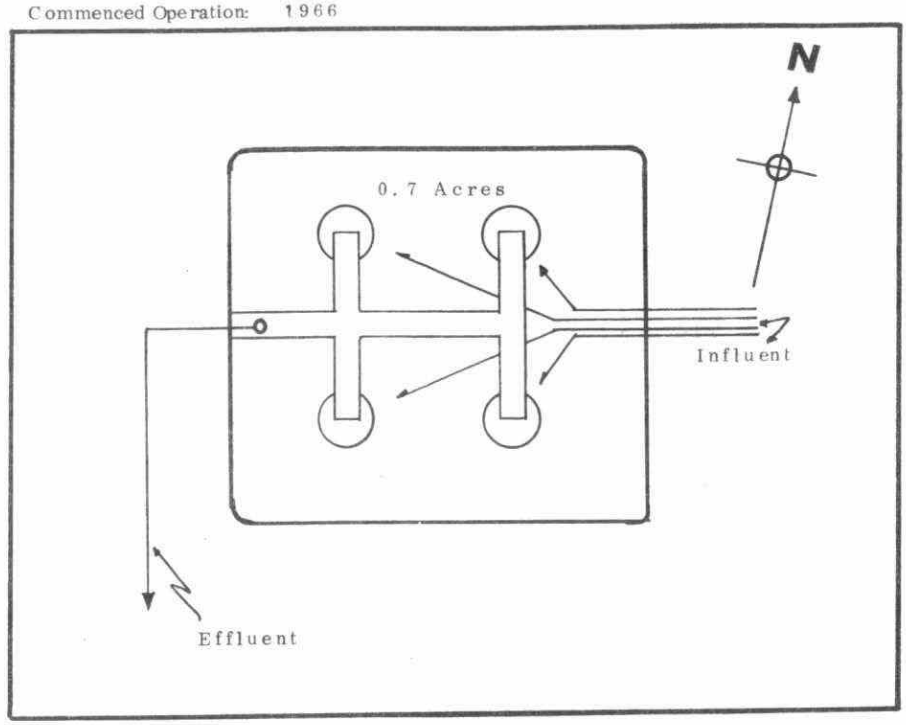
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 700 Igpm
Pump 2 : 700 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000999 DURHAM LAGOON

MUNICIPALITY : DURHAM
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : AERATED CELL
CONTINOUS DISCHARGE

CURRENT POPULATION : 2,467

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.290 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.653	.182	.213		79.0	46.0	41	1.8	92.0	60.0	34	1.8				
FEB	5.418	.193	.235		106.0	48.0	54	3.1	118.0	56.0	52	3.3	5.4	5.7	-	-
MAR	6.656	.215	.268		105.0	30.0	71	4.9	245.0	51.0	79	12.9	8.0	5.3	33	
APR	9.092	.303	.432		90.0	27.0	70	5.7	151.0	42.0	72	9.9	5.2	4.2	19	
MAY	7.397	.239	.360		62.0	23.0	62	2.8	49.0	34.0	30	1.1	4.6	5.0	-	-
JUN	6.325	.211	.340		68.0	33.0	51	2.2	91.0	55.0	39	2.2	6.7	6.1	8	
JUL	5.359	.173	.373		112.0	36.0	67	4.0	132.0	111.0	15	1.1	7.9	6.5	17	
AUG	* * 5.435	.175	.234		118.0	64.0	45	2.9	118.0	148.0	-	-	6.9	6.9		
SEP	5.616	.187	.268		94.0	33.0	64	3.4	65.0	147.0	-	-	7.7	6.3	18	
OCT	5.460	.176	.323		140.0	29.0	79	6.0	92.0	91.0	1		9.0	6.2	31	
NOV	4.818	.161	.210		130.0	74.7	42	2.6	126.0	160.0	-	-	7.1	7.0	1	
DEC	5.322	.172	.239		170.0	125.0	26	2.3	186.0	164.0	11	1.1	8.5	6.6	22	
TOTAL	72.551							41.7				33.4				
AVERAGE		.199	MAXIMUM .432		106.1	47.3	55		122.0	93.2	23		7.0	5.9	14	
NO. OF SAMPLES					23	25			23	25			23	24		

Waste Stabilization Pond

PROJECT : KINCARDINE

Cell Acreage : 16.0 + 16.0

Total Acreage : 32.0

Commenced Operation: JAN. 1965 Aerated Cell added in 1978

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- ■ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- □ Batch
- □ Continuous
- ■ None

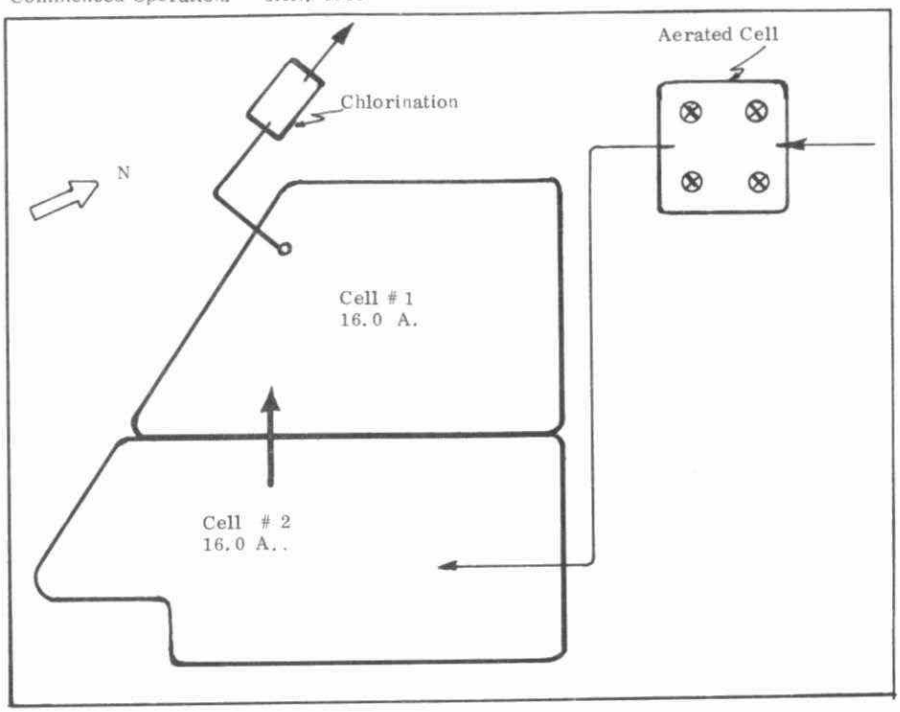
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 :
Pump 2 :

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000864 KINCARDINE LAGOON

MUNICIPALITY : KINCARDINE
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : AERATED CELL PLUS LAGOON
CONTINUOUS DISCHARGE

CURRENT POPULATION : 5,343

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.300 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	11.125	.358	.445		110.0	7.0	93	11.4	120.0	2.0	98	13.1	7.5	4.4	41	.3
FEB	10.116	.316	.411		160.0	10.0	93	15.1	162.0	5.0	96	15.8	8.5	5.0	41	.3
MAR	13.160	.365	.439		120.0	17.0	85	13.5	146.0	10.0	93	17.8	6.9	5.4	21	.1
APR	12.644	.421	.607		127.0	16.4	87	13.9	136.5	12.0	91	15.7	7.8	4.2	46	.4
MAY	12.172	.393	.516		135.5	21.5	84	13.8	107.5	25.5	76	9.9	8.5	3.2	61	.6
JUN	11.857	.395	.729		115.0	6.5	94	12.8	116.0	19.5	83	11.4	7.6	2.6	64	.5
JUL	10.563	.341	.396		122.5	8.6	92	12.0	121.5	13.5	88	11.4	7.4	2.7	62	.4
AUG	10.525	.340	.459		94.0	9.6	89	8.8	86.5	9.0	89	8.1	6.0	4.4	26	.1
SEP	13.432	.448	.784		26.0	10.4	60	2.0	40.0	7.5	81	4.3	1.6	4.0	-	-
OCT	13.918	.449	.571		56.0	3.5	93	7.3	32.0	2.8	91	4.0	3.7	3.7		
NOV	12.309	.410	.469		15.5	5.5	64	1.2	16.0	1.3	91	1.8	2.2	4.0	-	-
DEC	14.425	.465	.594		66.0	5.0	92	8.7	51.0	2.0	96	7.0	4.5	4.4	1	
TOTAL	146.246							120.5				120.3				2.7
AVERAGE		.392	MAXIMUM .784		95.6	10.0	89		94.5	9.1	90		6.0	4.0	33	
NO. OF SAMPLES					22	23			21	21			20	23		

Waste Stabilization Pond

PROJECT : LISTOWEL

Cell Acreage : 1.5 + 42.4 + 26.6

Total Acreage : 70.5

Commenced Operation : (Facultative Cells) : Sept. 1961
Expansion : (Aerated Cell) : Sept. 1971

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- □ Continuous
- □ Annual
- ■ Other : Dec-Apr : Continuous
  July-Oct : Spray Irr.

Phosphorus Removal:

- □ Batch
- ■ Continuous
- □ None

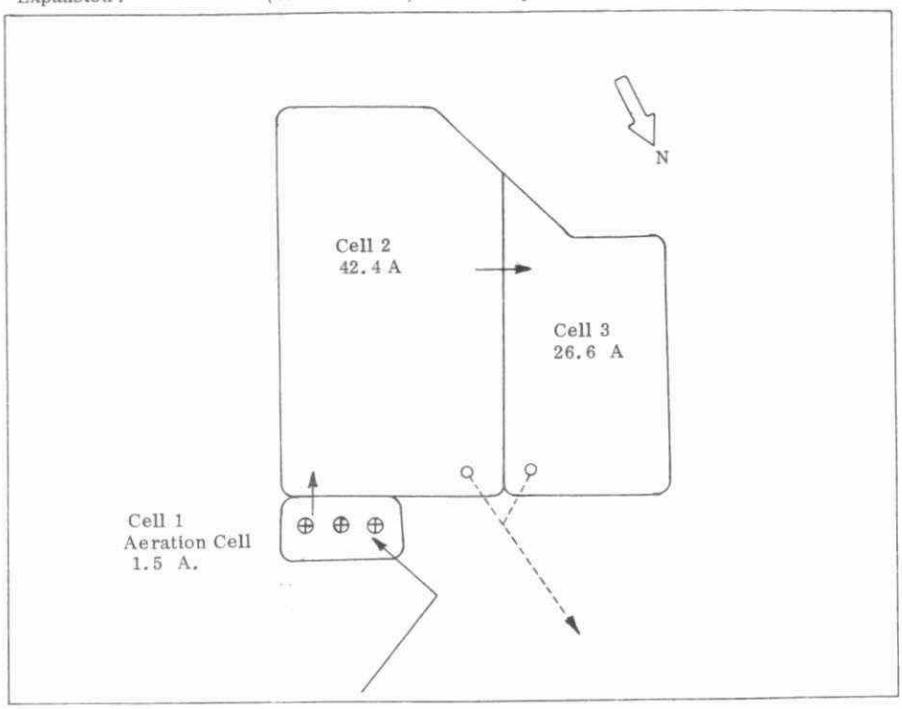
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 972 usgpm
Pump 2 : 972 usgpm

Total Cap : 1750 usgpm



Signifigant Industries : Campbell Soups Ltd

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000409 LISTOWELL LAGOON

MUNICIPALITY : LISTOWEL
REGION : 01 SOUTHWESTERN

CURRENT POPULATION : 4,972

TREATMENT FACILITY : AERATED CELL PLUS LAGOON
LAGOON AND SPRAY
PHOSPHORUS REMOVAL

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.000 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	32.200	1.039	1.730		476.0	20.0	95	146.8	356.0	11.0	96	111.0	4.1	.9	78	1.0
FEB	27.910	.996	1.700		370.0	29.0	92	95.1	271.0	12.0	95	72.2	7.7	1.1	85	1.8
MAR	41.190	1.328	2.120		190.0	28.0	85	66.7	152.0	13.0	91	57.2	5.5	1.5	72	1.6
APR	48.470	1.610	2.260		222.5	18.2	91	99.0	150.0	24.7	83	60.7	4.4	.7	82	1.7
MAY	33.180	1.070	1.410		104.5				52.0				2.6			
JUN	30.620	1.020	1.550		245.0				128.0				16.5			
JUL	21.880	.710	1.060		315.0				311.0				3.9			
AUG	20.250	.650	1.140		112.5				116.0				2.9			
SEP	28.070	.940	1.910		225.0				87.0				3.6			
OCT	31.750	1.023	1.600		197.5	*			81.0	*			5.7	*		
NOV	32.470	1.080	1.640		134.5	*			160.0	*			5.9	*		
DEC	34.050	1.098	1.700		263.0	*			170.5	*			4.5	*		
TOTAL	382.040							407.6				301.1				6.1
AVERAGE		1.047	MAXIMUM 2.260		237.9	23.8	89		169.5	15.1	91		5.6	1.0	80	
NO. OF SAMPLES					31	15			31	15			30	15		

Waste Stabilization Pond

PROJECT : THORNBURY

Cell Acreage : 4.38 + 9.67 + 10.19

Total Acreage : 24.24

Commenced Operation: August 1975

Operation :

- ☐ Series
- ☐ Parallel
- ■ Other : series-parallel

Discharge :

- ☐ Seasonal
- ☐ Continuous
- ☐ Annual
- ■ Other : semi-annual

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

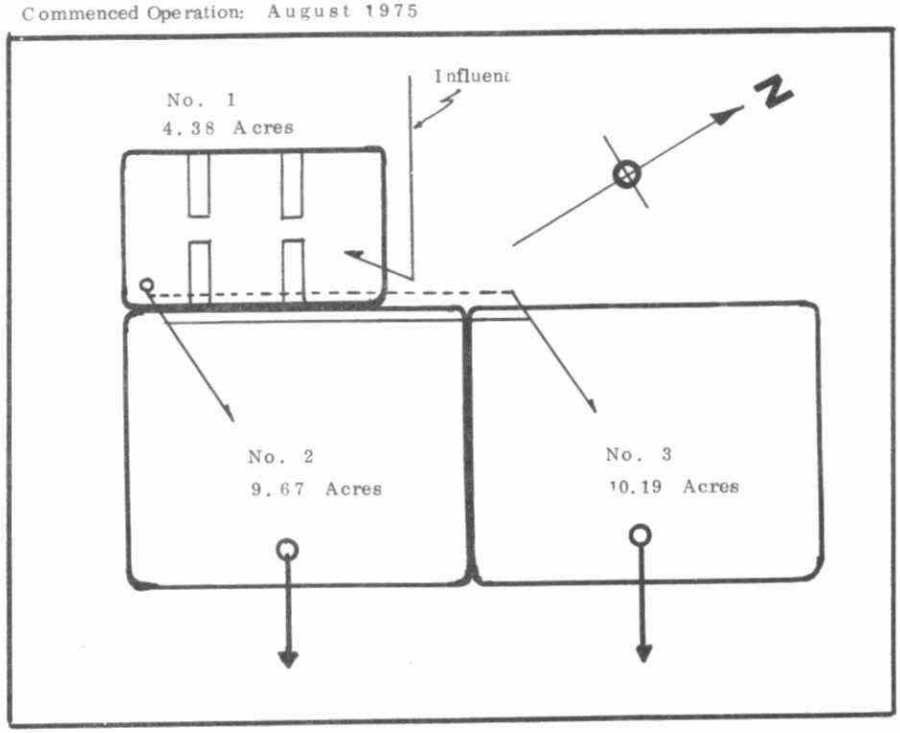
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 920 Igpm
Pump 2 : 920 Igpm

Total Cap :



ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001890 THORNBURY LAGOON

MUNICIPALITY : THORNBURY
REGION : 01 SOUTHWESTERN

TREATMENT FACILITY : AERATED CELL PLUS LAGOON

CURRENT POPULATION : 1,386

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.280 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><---				SUSPENDED SOLIDS ---><---				TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	5.173	.167	.233		34.0	24.0	29	.5	82.0	14.0	82	3.5	1.3	2.1	-	-
FEB	4.566	.163	.192		23.0	41.0	-	-	49.0	14.0	71	1.5	1.3	2.1	-	-
MAR	6.758	.218	.442		139.0	42.0	69	6.5	115.0	23.0	80	6.2	2.1	2.6	-	-
APR	8.323	.277	.389		42.0				62.0				1.9			
MAY	6.349	.204	.517		95.0	14.2	85	5.1	35.0	23.0	34	.7	1.3	1.5	-	-
JUN	4.497	.150	.180		7.0				8.7				.8			
JUL	4.802	.155	.232		20.0				46.0				2.2			
AUG	5.050	.163	.279		10.6				26.0				.9			
SEP	5.367	.179	.366		9.5				15.0				1.0			
OCT	7.475	.241	.307		47.0	13.4	71	2.5	56.5	15.5	72	3.0	1.3	1.5	-	-
NOV	6.524	.217	.279		57.0	9.9	82	3.0	111.0	21.6	80	5.8	1.7	3.0	-	-
DEC	6.146	.198	.321		50.5	22.9	54	1.6	116.5	23.5	79	5.7	1.5	2.5	-	-
TOTAL	71.030							19.2				26.4				
AVERAGE		.194	MAXIMUM .517		44.5	23.9	46		60.2	19.2	68		1.4	2.2	-	
NO. OF SAMPLES					38	28			38	28			38	28		

Ministry of the Environment
Ontario

West Central Region
(2)

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STONEY CREEK
140 Centennial Pkwy. N.
416-561-7410

DISTRICT OFFICES
Welland
637-641 Niagara St. N.
416-735-0431

Cambridge
400 Clyde Road
P.O. Box 219
519-623-2080

Waste Stabilization Pond

PROJECT : WATERFORD

Cell Acreage : 2.2 (Aeration) + 16.5

Total Acreage : 18.7

Commenced Operation (Facultative Cell) : Aug 1962
Expansion (Aeration Cell) : Jan 1975

Operation :

- ☐ Series
- ☐ Parallel (Aerated Lagoon)
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ■ Continuous
- ☐ None

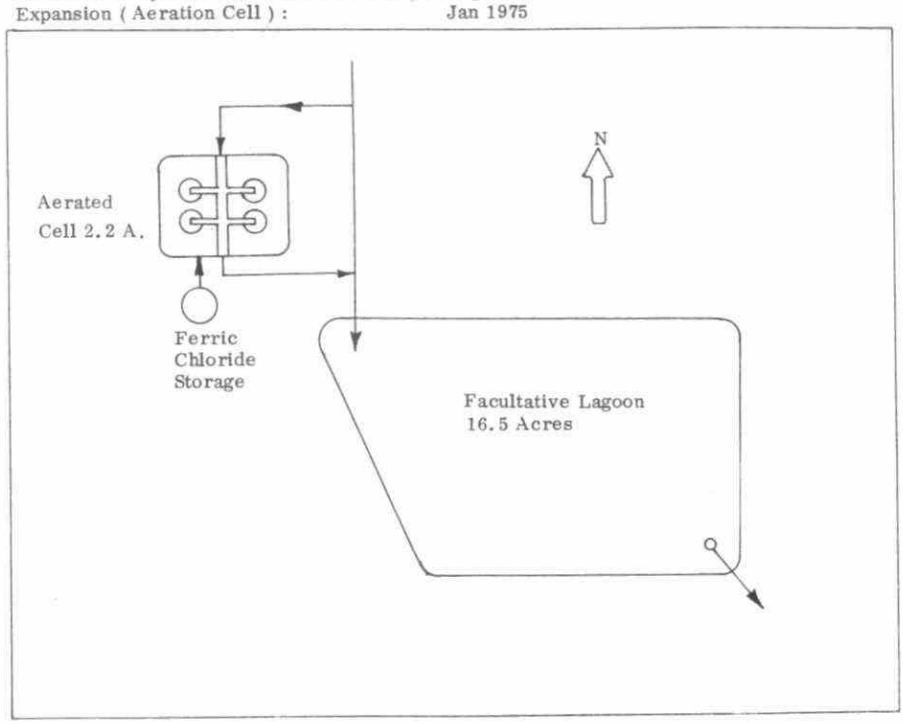
Flow Measurement :

- ■ Flow Meter
- ☐ Integrator
- ☐ Pump Timer

Pumping Station

Pump 1 : 1500 US gpm
Pump 2 : 1500 US gpm

Total Cap : N/A



Signifigant Industries : Canadian Canners, Toronto Mill, Stock Woolen Mill.

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110001195 NANTICOKE (WATERFORD)

MUNICIPALITY : NANTICOKE
REGION : 02 WEST-CENTRAL

TREATMENT FACILITY : AERATED CELL PLUS LAGOON
PHOSPHORUS REMOVAL

CURRENT POPULATION : 18,829

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.470 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78					*	*			*	*			*	*		
JAN	9.164	.296	.736													
FEB	13.314	.429	.540		62.0	90.0	-	-	75.0	27.0	64	6.3	1.8	4.5	-	-
MAR	15.110	.487	.631		265.0	46.0	82	33.0	108.0	20.0	81	13.2	7.5	3.5	53	.6
APR	8.068	.260	.374		120.0	18.0	85	8.2	79.0	22.0	72	4.5	5.5	4.5	18	
MAY	9.055	.292	.430		215.0	6.4	97	18.8	93.0	14.2	84	7.1	6.5	3.9	40	.2
JUN	7.779	.251	.352		22.0	9.6	56	.9	33.5	72.0	-	-	1.7	4.6	-	-
JUL	7.989	.258	.403		30.0	16.8	44	1.0	57.0	25.0	56	2.5	3.7	3.1	15	
AUG	9.409	.304	.460		44.0	11.6	73	3.0	25.0	24.0	4		3.6	3.0	16	
SEP	8.529	.284	.399		165.0	10.0	93	13.2	101.0	12.0	88	7.5	8.7	5.1	41	.3
OCT	6.914	.223	.280		32.0	3.2	90	1.9	21.0	16.0	23	.3	1.4	4.6	-	-
NOV	6.728	.224	.305		90.0	4.0	95	5.7	82.0	7.0	91	5.0	4.1	1.9	53	.1
DEC	6.718	.217	.308		12.0	7.3	39	.3	8.0	4.0	50	.2	4.5	2.9	34	.1
TOTAL	108.777							86.0				46.6				1.3
AVERAGE		.294	MAXIMUM .736		96.0	20.2	78		62.0	22.1	64		4.4	3.7	14	
NO. OF SAMPLES					12	16			14	18			14	18		

Ministry of the Environment
Ontario

Southeastern Region
④

REGIONAL OFFICE
KINGSTON
133 Dalton St.
613-549-4000

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Belleville
15 Victoria Ave.
613-962-9208

Cornwall
4 Montreal Rd.
613-933-7402

Ottawa
2378 Holly Lane
613-521-3450

Pembroke
1000 MacKay St.
P.O. Box 67
613-732-3643

Waste Stabilization Pond

PROJECT : ALEXANDRIA

Cell Acreage : 13.6 + 12.8 + 16.0

Total Acreage : 42.4

Commenced Operation : N/A

Operation :

- ☐ Series
- ■ Parallel
- ☐ Other :

Discharge :

- ☐ Seasonal
- ■ Continuous
- ☐ Annual
- ☐ Other :

Phosphorus Removal:

- ☐ Batch
- ☐ Continuous
- ■ None

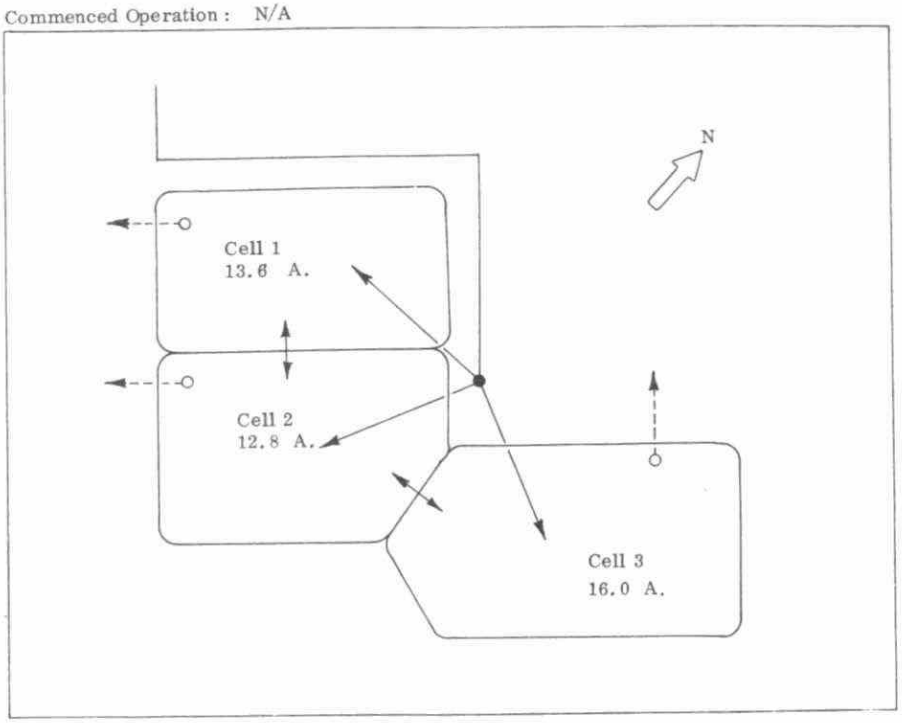
Flow Measurement :

- ☐ Flow Meter
- ☐ Integrator
- ■ Pump Timer

Pumping Station

Pump 1 : 800 I gpm
Pump 2 : 850 I gpm

Total Cap : 1590 I gpm



Signifigant Industries : Consolidated Textiles

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000846 ALEXANDRIA LAGOON

MUNICIPALITY : ALEXANDRIA
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : AERATED CELL PLUS LAGOON

CURRENT POPULATION : 3,437

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA			---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
						REDUCTION				REDUCTION				REDUCTION	
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	%	10(3) LBS
JAN/78-DEC/78																
JAN	*	*			*	*			*	*			*	*		
FEB	*	*			*	*			*	*			*	*		
MAR	*	*			*	*			*	*			*	*		
APR	72.500	2.420	4.000		120.0	8.0	93	81.2	100.0	12.0	88	63.8	8.1	4.7	41	2.4
MAY	32.300	1.040	1.500		*	*			*	*			*	*		
JUN	32.154	1.070	1.500		170.0	17.0	90	49.1	75.0	25.0	66	16.0	9.4	13.0	-	-
JUL	25.530	.823	1.200		131.0	16.7	87	29.1	68.0	29.0	57	9.9	8.3	11.5	-	-
AUG	28.920	.933	1.418		160.0	15.5	90	41.7	83.5	17.5	79	19.0	54.0	11.0	79	12.4
SEP	24.869	.828	2.674		135.0	17.0	87	29.3	110.0	20.0	81	22.3	32.0	11.0	65	5.2
OCT	26.473	.853	1.104		*	*			*	*			*	*		
NOV	27.353	.911	1.031		100.0	55.0	45	12.3	105.0	30.0	71	20.5	19.0	9.8	48	2.5
DEC	24.766	.799	.949		288.0	*			145.0	*			44.0	*		
TOTAL	294.865							242.7				151.5				22.5
AVERAGE		1.075	MAXIMUM 4.000		157.7	21.5	86		98.0	22.2	77		24.9	10.1	59	
NO. OF SAMPLES					11	9			11	9			11	9		

Waste Stabilization Pond

PROJECT : ALMONTE

Cell Acreage : 23.4 + 7.3 + 9.0 + 6.0 + Aeration Cell

Total Acreage : 45.7 + Aeration Cell

Commenced Operation : Sept. 1962 - Aeration Added Sept. 1975

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- ■ Seasonal
- □ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch
- □ Continuous
- □ None

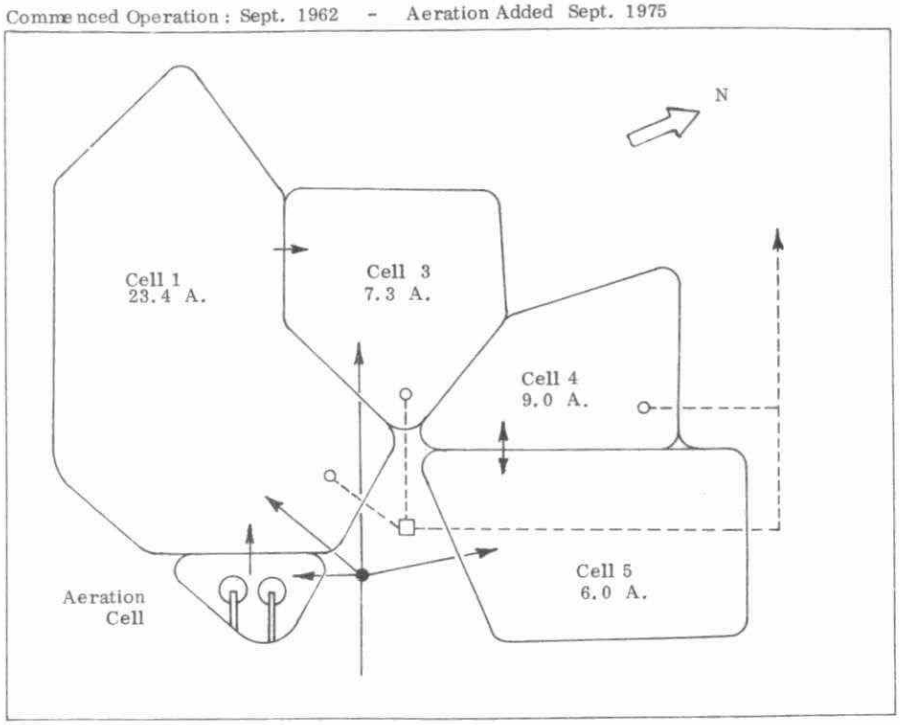
Flow Measurement :

- □ Flow Meter
- ■ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 650 I gpm
Pump 2 : 650 I gpm

Total Cap : 1000 I gpm



Signifigant Industries : Woolen Mills

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000873 ALMONTE LAGOON

MUNICIPALITY : ALMONTE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON SEASONAL AERATED CELL

CURRENT POPULATION : 3,839

* N O DATA AVAILABLE

OPERATING AUTHORITY : MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 1.200 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS ---><--- TOTAL PHOSPHORUS --->											
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	21.798	.703	.800		40.5				68.5				3.5			
FEB	12.930	.462	.630		72.5				101.0				4.8			
MAR	17.640	.579	.830		58.0				100.0				2.1			
APR	22.850	.760			28.0				35.0				2.0			
MAY	*	*			162.0	10.8	93		88.5	12.0	86		4.0	1.2	70	
JUN	12.460	.420	.730		32.0				37.5				3.4			
JUL	13.210	.430	.470		49.9				65.0				8.5			
AUG	14.600	.470	.500		107.5				170.0				7.3			
SEP	14.970	.490	.510		140.0				190.0				9.6			
OCT	15.150	.480			155.0	7.2	95	22.3	177.5	26.7	84	22.8	8.8	3.7	57	.7
NOV	12.640	.420			100.0				147.5				5.8			
DEC	17.390	.560	.690		85.0				100.0				4.6			
TOTAL	175.638							22.3				22.8				.7
AVERAGE		.525	MAXIMUM .830		85.8	9.0	89		106.7	19.3	81		5.3	2.4	53	
NO. OF SAMPLES					23	20			23	20			21	20		

Waste Stabilization Pond

PROJECT : GANANOQUE

Cell Acreage : 16.8 + 22.3 + 30.3

Total Acreage : 69.4

Commenced Operation : Apr. 1966

Operation :

- ■ Series
- □ Parallel
- □ Other :

Discharge :

- □ Seasonal
- ■ Continuous
- □ Annual
- □ Other :

Phosphorus Removal:

- ■ Batch (1976)
- □ Continuous
- ■ None (1975)

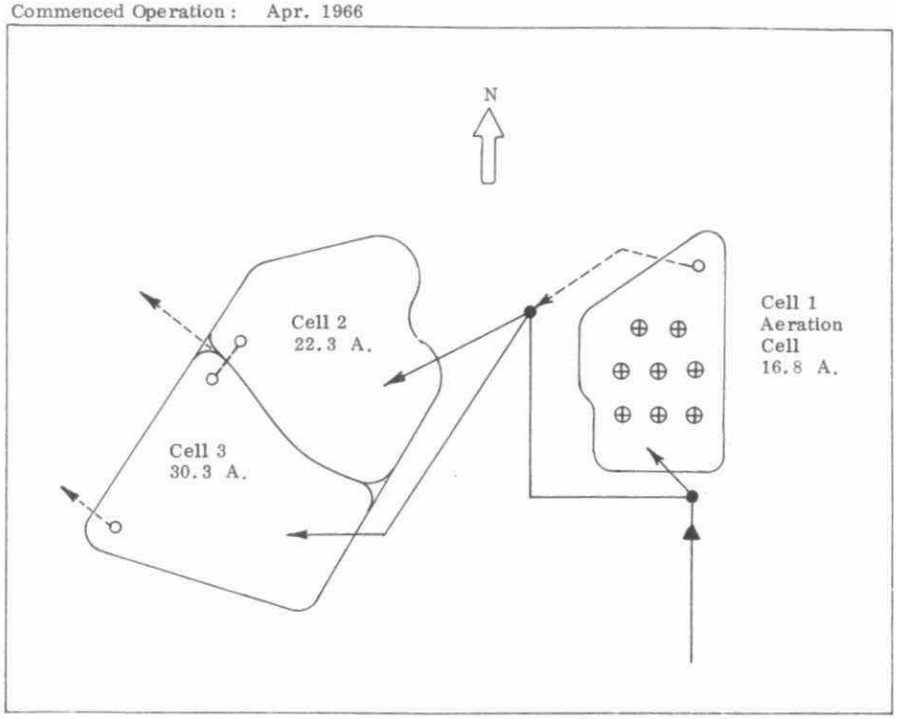
Flow Measurement :

- ■ Flow Meter
- □ Integrator
- □ Pump Timer

Pumping Station

Pump 1 : 1650 I gpm
Pump 2 : 1650 I gpm

Total Cap : 2400 I gpm



Signifigant Industry : Ault Foods

ONTARIO MINISTRY OF THE ENVIRONMENT — UTILITY MONITORING INFORMATION SYSTEM

REPORT TYPE 001 — WASTE STABILIZATION PONDS - PERFORMANCE REPORT

WORKS NUMBER : 110000285 GANANOQUE LAGOON

MUNICIPALITY : GANANOQUE
REGION : 04 SOUTHEASTERN

TREATMENT FACILITY : CONVENTIONAL LAGOON CONTINOUS

CURRENT POPULATION : 4,907

** COMMENT: HYDRAULIC OVERLOAD

* NO DATA AVAILABLE

OPERATING AUTHORITY: MINISTRY OF THE ENVIRONMENT

DESIGN CAPACITY : 0.700 MIGD DESIGN BOD5 : MG/L DESIGN SUSP.SOLIDS : MG/L

	<--- ** FLOW DATA				---><-BIOCHEMICAL OXYGEN DEMAND-><--- SUSPENDED SOLIDS				---><--- TOTAL PHOSPHORUS --->			
DATE	TOTAL FLOW MIG	DAILY AVERAGE MIGD	DAILY MAXIMUM MIGD	LBS. ACRE DAY	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS	INFLUENT MG/L	EFFLUENT MG/L	REDUCTION %	REDUCTION 10(3) LBS
JAN/78-DEC/78																
JAN	44.610	1.440	3.250		*	*			*	*			*	*		
FEB	32.750	1.170	1.360		*	*			*	*			*	*		
MAR	48.360	1.560	2.850		*	*			*	*			*	*		
APR	44.280	1.480	2.940		*	*			*	*			*	*		
MAY	29.980	.970	1.110		*	*			*	*			*	*		
JUN	27.590	.920	1.110		*	16.0			*	55.0			*	2.0		
JUL	26.730	.860	.990		*	*			*	*			*	*		
AUG	25.930	.840	1.140		*	*			*	*			*	*		
SEP	26.290	.890	1.440		*	*			*	*			*	*		
OCT	29.580	.950	1.220		60.0	12.0	80	14.1	50.0	25.0	50	7.3	2.4	3.8	-	
NOV	30.470	1.020	1.970		34.0	12.0	64	6.7	97.0	21.0	78	23.1	3.0			
DEC	34.400	1.110	1.620		*	*			*	*			*	2.7		
TOTAL	400.970							20.8				30.4				
AVERAGE		1.101	MAXIMUM 3.250		47.0	13.3	71		73.5	33.6	54		2.7	2.8	-	
NO. OF SAMPLES					4	5			4	5			4	5		

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